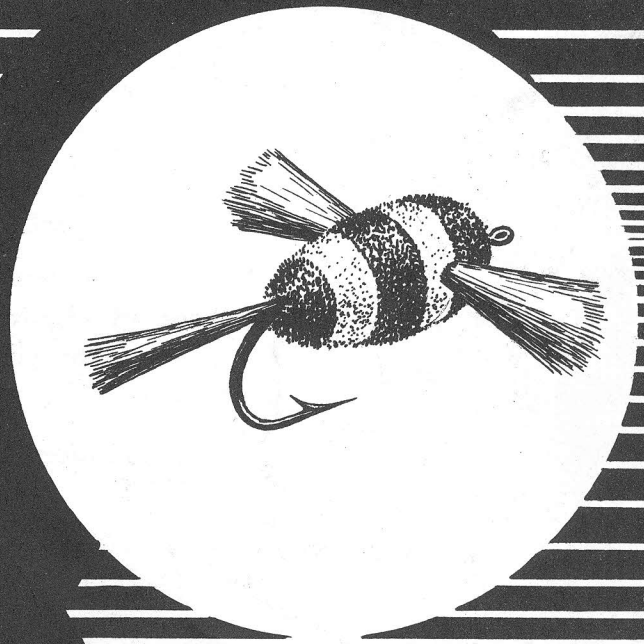
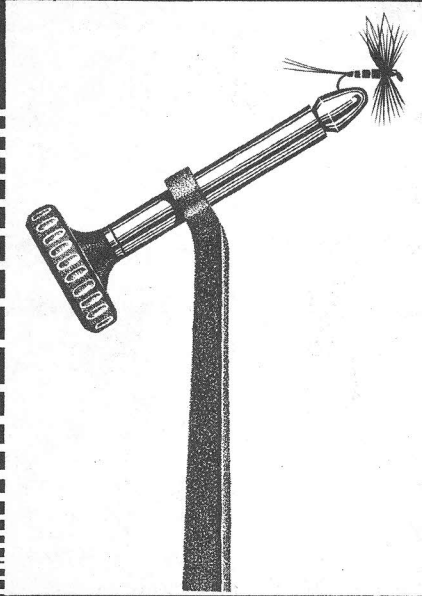


A SIMPLIFIED COURSE IN—

By George W. Harvey

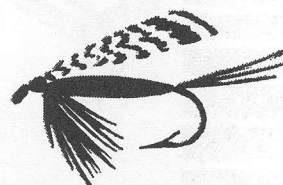
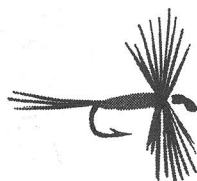
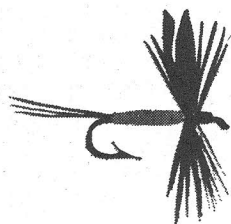
FLY TYING



JOHN F. CLARK

A SIMPLIFIED COURSE IN

Fly Tying



By **GEORGE W. HARVEY**

Associate Professor

**College of Physical Education and Athletics
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In Pennsylvania, thirty-five years ago, fly-tyers were just about as scarce as three pound brook trout are today. The few professionals who knew anything about the art were so secretive that it was almost impossible to learn anything except what one could figure out for one's self. Today I suppose there are roughly twelve thousand enthusiastic types in our state.

Personally, I can think of no better hobby for the budding or accomplished trout fisherman than fly-tying. The creative, artistic and personal enjoyments one derives from this hobby is sufficient in itself, but they are only part. This skill keeps us closely associated with angling during the off season and supplies a worthwhile and profitable recreation for our leisure time.

Surely the trout fisherman who is proficient at both angling and fly-tying will be much better prepared to meet the challenge of our heavily fished streams today.

Fly-tying, contrary to the belief of many, is quite simple to master. Some tyers become more proficient than others,

but I have never had one student who could not tie flies well enough to take trout.

I take pride in being able to state that I believe I have taught more people to tie flies than has any other living individual. I have been teaching fly-tying continuously since 1934 and in this span have given instructions to well over 6000. This experience, plus what I have learned from others, has convinced me that "haste means waste" in so far as teaching fly-tying is concerned. This series will be written with this in mind, hoping that beginners will find our simple techniques easy to follow and master and that by the time we have finished, will be taking trout on their own creations.

There are many little tricks in fly-tying every tyer picks up that to him seem best. However, many are quite difficult to describe verbally. I will only include those that can be seen diagrammatically or described well enough for the majority to understand easily.

The tools and materials for the fly-tyer are many. It is surprising how much can be accumulated in a very short time and how quickly all can be lost unless the proper precautions are taken against moths and beetles.

Space does not permit me to list all the materials that can be used, so I will list only the essential tools and common materials.

Tools:

(1) Vise, bobbin, scissors (preferably sharp pointed), hackle pliers, and dubbing needle. In addition (if the pocketbook permits) one could purchase a whip finisher, half-hitching tools, tweezers, flat-nosed pliers and many other articles but these are not really necessary.

(2)

Materials:

Hooks—sizes No. 10, 12, 14, 16 in regular length shank or any other hooks that may be preferred. The sizes mentioned are the most popular. Most quality flies are tied on hollow point hooks having turned down tapered eyes. Since hooks are an expensive item, I suggest the beginner send for a material catalog from some supply house, then have someone who is experienced recommend the best for his needs.

(3) Tying silk—This is now mainly nylon. The beginner should have several sizes from No. 00 for bucktails and streamers to No. 00000 or No. 000000 for smaller flies.

(4) Hackle: Both wet and dry fly quality in colors necessary for the patterns you will tie. There are dozens of colors and shades and all vary in quality. Ninety percent of all commercial flies are tied with the following colors: Brown, ginger, light ginger, grizzley, black and blud dun.

(5) Body materials: Silk floss, chenille, wool, spun fur, dubbing, peacock herl, quills, tinsel, etc.

(6) Wing materials: Wing quills (from any bird) depending on colors. Duck quills are most frequently used, breast and side feathers from mallard, wood duck, teal, etc., deer hair, squirrel, badger, groundhog and many others.

(7) Tails: Throat hackle is best for dry flies. Use material used for other type flies.

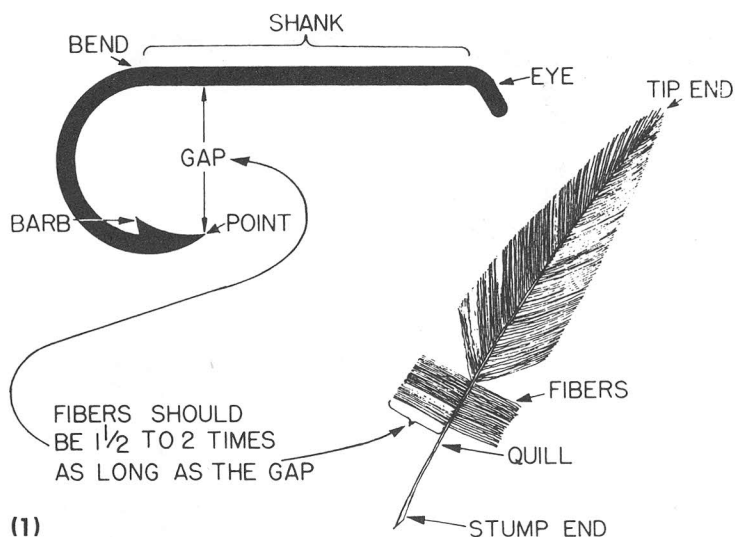
(8) Bucktails and streamer flies: Saddle hackle is used most frequently for feather wing streamers, however, neck hackles may be used. Deer tail hair is most commonly used on bucktails but any hair that is long enough and the desired color can be used.

(9) Lacquer: Finish off a fly with some waterproof lacquer, cement or varnish. A fast drying lacquer is most popular.

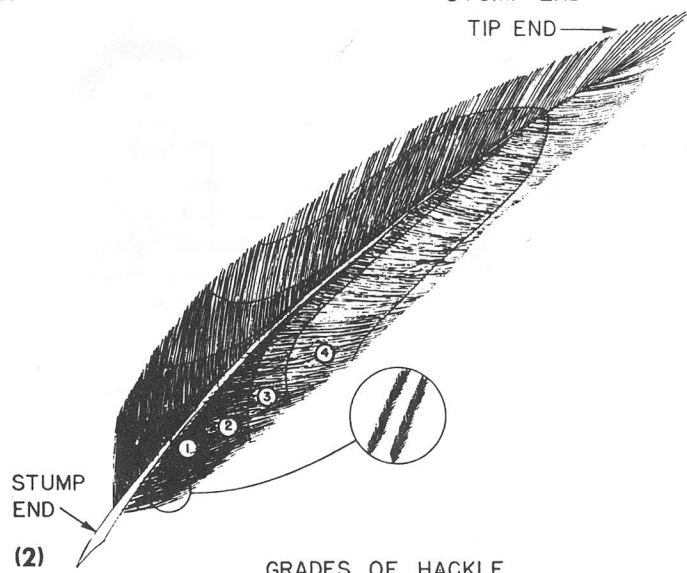
Let me repeat, this list is by no means complete but will be sufficient for any beginner. Remember, if you are a beginner, it is not necessary to have all the materials listed. Use what you have and add to your supply as you are able. A sample fly as a model would be a great help for the beginner.

TYING HACKLE WET FLY

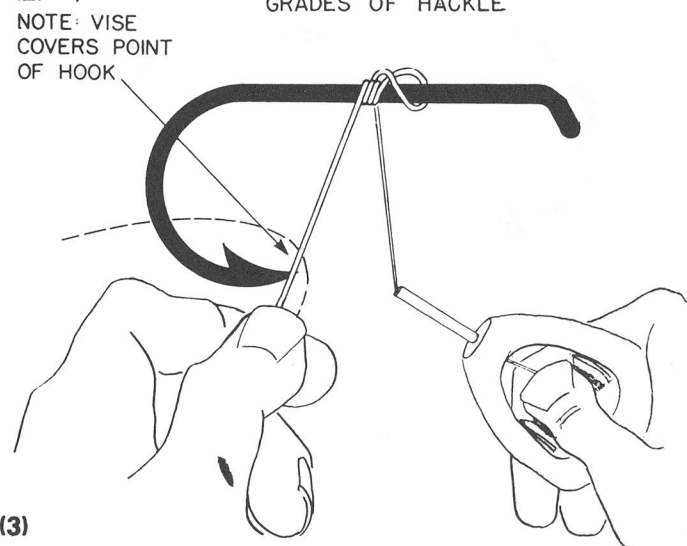
Before the beginner starts to tie he should make a careful study of Diagrams No. 1 and No. 2. The hackle is the neck feather from fowl.



(1)



(2)



(3)

TAIL SHOULD BE AS LONG AS SHANK OF HOOK

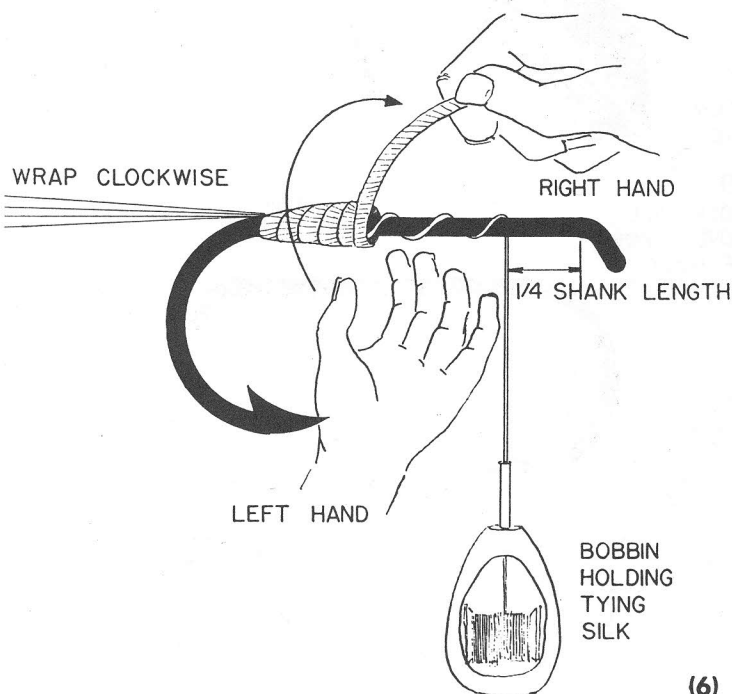
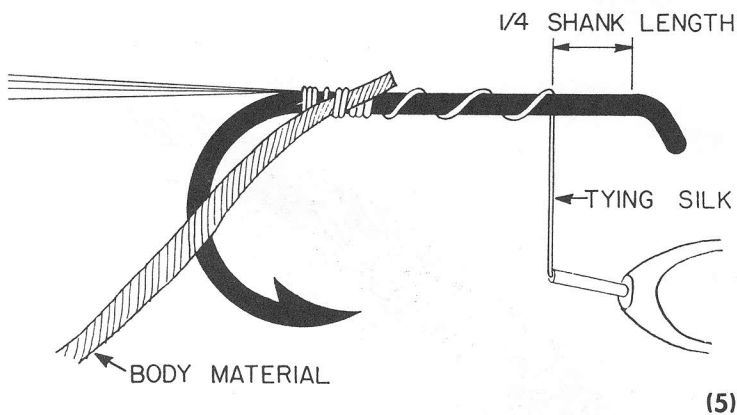
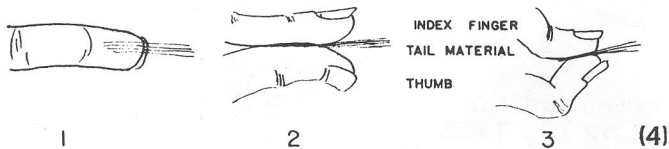
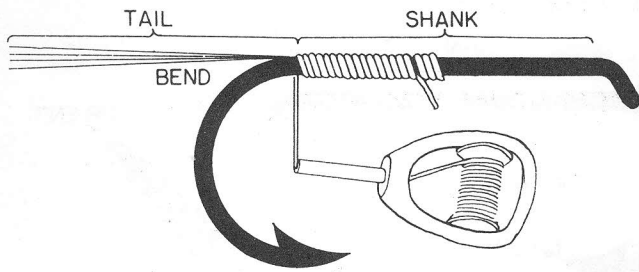


Diagram No. 1 shows the important parts of a hook and how to select hackle in relation to size of hook. For any regular fly, both wet and dry, this rule holds true. The hackle fibers should be from one and one-half to two times as long as the gap of the hook you are tying on. It is best to gauge the hackle by selecting fibers in the center third or middle of the hackle. The "bend" is the point where the hook starts its downward bend. The eye is at the front end and the bend at the rear of the hook.

Diagram No. 2 shows the various grades of hackle. Any feather from any bird, if the fibers are long or short enough for the hook size you are tying on, can be used for wet fly hackle. However, 99 per cent of all dry flies are tied from cocks' hackle. Here we want a hackle that is long (from tip to stump end) with short, stiff, glossy fibers that have a minimum amount of down or webbing. If you take any cock's hackle and hold it against a contrasting background, you can easily see the webbing on the fiber. This is illustrated by the small circle in diagram. You can now compare the hackle with the one in diagram. If the hackle only has a small dense area of down near the stump end as illustrated by (1) and the rest of the fibers are clear, you have super quality hackle; (2) and (3) are still very good quality hackle; (4) should only be used for wet flies unless no other is available.

Diagram No. 3. Hook should be placed in vise (represented by the dotted line) so the point of the hook is covered, allowing as much clearance between the top of the vise and shank of the hook as is possible. The tyer should be seated directly in front of the vise. Now we are ready to begin.

There are many different types of fly-tying bobbins. I like one that is light in weight so that the finest of tying silk will hold it when suspended.

Note how this bobbin is held, thumb on spool and held by fingers. Never hold any bobbin back in palm of hand. I suggest the beginner start with 000 or 0000 tying silk.

All diagrams and descriptions will show the right handed tyer.

Take end of tying silk between thumb and first finger of left hand, holding bobbin in right and allowing about three inches of tying silk between bobbin and left hand. Now lay tying silk over top of hook. Start winding clockwise, with bobbin hand, at center of hook making a few turns toward front of hook. Now, holding tying silk firmly, wind back over initial turns, continuing back to one-third the distance in front of bend. Cut off protruding end of tying silk. It would now be a good idea to turn to explanation of Diagram No. 10 and practice a few of the half hitches. If you wait until you are ready to finish the fly to learn this step you may find yourself in trouble.

Diagram No. 4. Form a large hackle strip off four to six fibers for tail. Be sure to keep tip ends even. Remember, the tail should be as long as the shank of the hook. The small diagrams show how to hold the tail. 1 shows the position of tail on index finger, 2 shows how to hold so that ends of thumb and finger are even.

Tying silk should now be about one-third from bend of hook before you start to tie on the tail. Hold tail on top

of hook so that fibers are flat on shank, with the ends of thumb and finger apart as in No. 2. Now bring the tying silk up between the thumb and tail material, back far enough so it can be held between the thumb and finger. Then over the top of the tail and shank of hook and down the other side between the tail and the index finger. Before you draw the tying silk up, close the thumb and finger as in 3. This should hold the tail secure on top of the shank of the hook. Make several more turns with tying silk as diagrammed, being sure to hold tail directly on top of shank.

Diagram No. 5. Select body material. Single or untwisted silk floss or chenille is best for the beginner. Tie in body material with a few turns of the tying silk just in front of tail, and continue winding tying silk up to one-fourth the length of the shank, back from the eye. Remember body material and all other material should be held, when tying, in the same manner as the fibers for tail were held.

Diagram No. 6. When winding on body material, to the right, use right hand to take material over the top of shank and the left to pick it up in under. If it is necessary to wind back to the left as may happen when building up body, reverse the above, using the left hand over the top and the right in under.

For the wet fly build a tapered body as shown by Diagram No. 6 and run body up to tying silk.

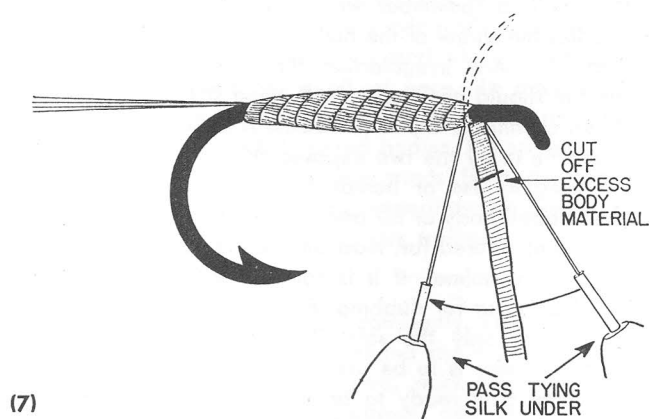
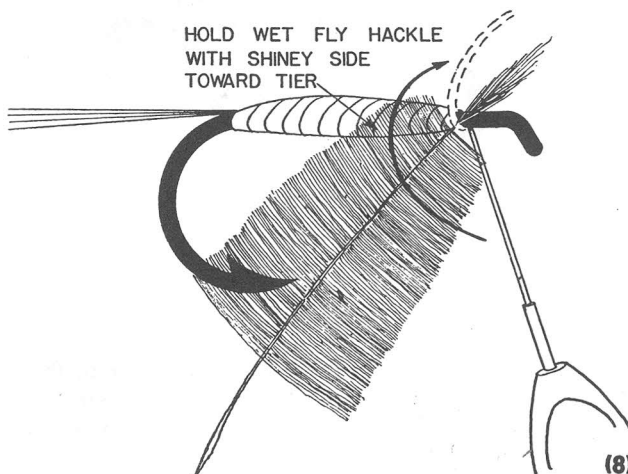


Diagram No. 7. When this step is reached you should be holding the body material between thumb and finger of the left hand. Now pass tying silk under body material and change hands, bobbin in the left, body material in the right. Wind tying silk over top of body material as shown by the dotted lines. Take several turns up as close to body as is possible. Now cut off excess body material. Be sure not to cut tying silk; beginners do this very thing quite often.

Diagram No. 8. Select wet fly hackle that has fibers the right length for the size hook you are using. Remember, the fibers should be one and one-half to two times as long as the gap of the hook. Hold by the tip end and stroke the fibers between the thumb and index finger, working from tip toward the stump end. The purpose of this stroking is to make the fibers stand out perpendicular to

the quill. Tie tip end of hackle, close to body so that the top or shiny side of hackle is on top facing out. Take enough turns around top so it will not pull out. Tying



silk should now be almost up to the eye. Cut off protruding tip end. Grasp stump end of hackle with hackle pliers and start winding hackle around shank of hook. Make first turn as close to the body as is possible, keeping the flat and shiny side of hackle facing the eye of the hook. Three to five turns of the hackle is sufficient for any wet fly. When winding hackle, use hands in the same manner as when winding the body. As each turn of hackle is made, fibers should be stroked back. This can easily be accomplished by holding hackle pliers in right hand and using thumb and first two fingers to stroke hackle back. Now make next turn close in front and repeat.

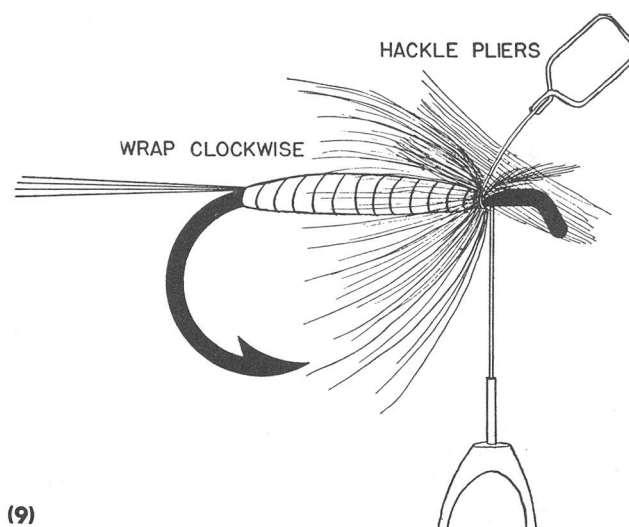
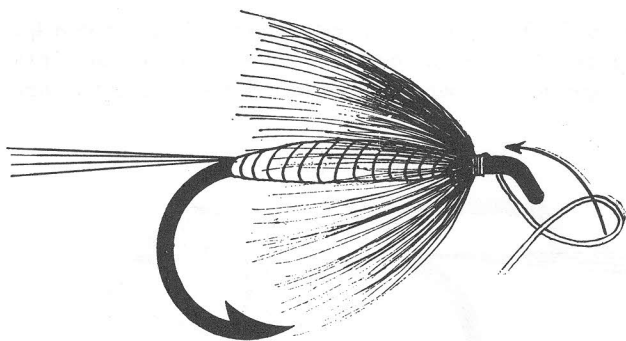


Diagram No. 9. After three to five turns have been made, end with the hackle on top in right hand. Now hold in this position and bring tying silk up over in the same manner as used in securing the body. Cut off excess stump end and make enough additional turns so as to cover all visible material.



HALF-HITCH KNOT FINISHES OFF
THE FLY

(10)

Diagram No. 10. We are now ready to finish the fly. This diagram shows the half hitch knot. Remember, now as in all operations, the tying silk must be held firmly so it will not unwrap.

I suggested earlier in Diagram No. 3 that you practice the half hitch. I will describe the knot. Hold bobbin in the left hand so about three inches of tying silk is between left hand and bobbin. Grasp tying silk between bobbin and hook, and close to body, with tips of index finger and thumb of right hand, and with nail of index finger facing you. Holding tying silk secure in right hand and slackening silk from bobbin hand, make a half turn clockwise with right hand dropping loop formed over eye of hook. Three half hitches are usually sufficient. Be sure each is drawn tight. Later on I will describe the whip finish. Complete the fly with drop of lacquer on head.

In concluding I want to make it clear that the diagrams are not supposed to be drawn to scale. That has been the trouble with all illustrations on fly-tying I have ever seen. I wanted each diagram to show clearly each step so that even the beginner would have no difficulty following the procedure.

BODY CONSTRUCTION AND THE HACKLE DRY FLY

The neophyte fly tyer's greatest temptation is the urge to advance too rapidly. It is quite easy for anyone to tie quality flies if time is taken with the fundamentals, and if each step is mastered before going on to the next. Most anglers who are fly tyers take pride in their handiwork and take great pains to make each fly a work of art. They proudly display their creations to fellow anglers and wait for the praise they justly deserve!

I know of no greater crime than to pick up a beautiful dry fly and, by mishandling, crush the hackle or wings. The fruits of a half hour's labor can be ruined in just a second or two by such an act. I have heard many fishermen say an old "beat up" dry fly is best! I am ready to admit I have taken many trout on flies in this condition, but I know from experience a well-dressed dry fly, with good quality hackle, one that will ride the water as it was tied to ride, will consistently take more trout.

FLY BODIES

There are many materials used for fly bodies. The most common are silk floss, dubbing, quill, chenille, and wool. Of all body materials, I believe the poorest is wool. I, personally, never use it, substituting dubbing, natural or dyed. Quills from the eye of an eyed peacock feather are the quills most frequently used, but hackle quill, and quill stripped from primary flight feathers (duck quills) and others are not uncommon.

To prepare peacock eye quill for use, one must remove the fine hair or fuzz from the fibers. Lay the fiber on a table with a light background. Hold by the tip and stroke toward the butt end with a soft eraser. For most flies, two inches of quill is sufficient. If you try to remove the hair from the entire fiber, the upper half frequently breaks. The butt end is the strongest and widest and is the part to use. If the fibers are soaked in water for a half hour the fine hairs can easily be stripped by sliding the fiber between the nails of the index finger and thumb.

Hackle quill is by far the most substantial, and I like to use it whenever possible. To prepare the quill, strip the fibers from a large neck or saddle hackle. Now, soak the quill, for at least an hour in water. Tie in by small end and wind on, winding so that each turn is as tight against the preceding one as is possible. Never overlap. This type of quill gives an even-tapered body. A thin coating of lacquer over the body will help show up the segmentation more clearly.

It is well to remember when using any quill or tinsel for bodies the shank of the hook should be kept as smooth as possible. Any irregularities that show up after tying in the tail should be filled in with tying silk.

When chenille is used for bodies, it is best to shred the end and tie in by the two exposed threads. This way you avoid irregularities or humps in the body.

The dubbed body or fur body is very popular. By blending different colored fur, most any shade can be obtained. Fur from any animal, if it is soft enough, may be used.

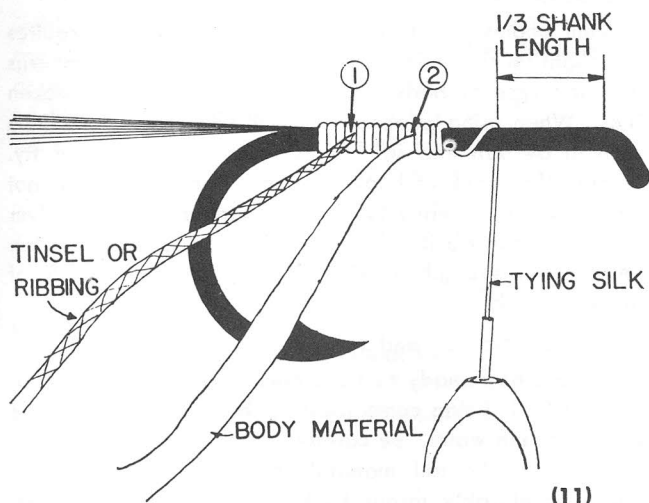
To prepare fur for dubbing, first pull out all long guard hairs so that only the soft silky under fur remains. If the natural color is to be used the under fur may be left on the hide until ready to be used. However, I still like to pull it out and separate it so no small bunches hold together. If one wants to blend, several colors (dyed or natural) may be used. Mix them by pulling out or cutting off close to hide a little of each color. Lay them together and pull apart; lay back together and repeat until original colors are blended to new shade. You may have to add a little extra of one or more colors and mix again if the shade is not what you want.

Diagram No. 11

All fly bodies are wrapped on in precisely the same manner. Of course, they may vary in thickness and taper but the procedure is the same.

Diagram No. 11 illustrates the ribbed body. It shows the procedure and the correct order in which the body and ribbing material are tied on.

After the tail is secured, work the tying silk to the bend



and tie in ribbing material here, (1). Now tie in body material (2); and spiral tying silk up to one-third distance of eye. Wind body material and tie off as previously described. Next, spiral ribbing over body and tie off. For the dry fly I prefer to have the body slightly tapered from the rear to the front end. Most fly tyers have trouble with the ribbing; in fact, many believe it is impossible to wind the ribbing so it will not slip. The way to overcome this difficulty is not to take any extra turns around the butt end of body before spiralling is started, nor to take any close turns in front of the body before tying off. Start to spiral the ribbing material immediately and when the front end of body is reached, tie it off at once. In addition, the spirals should be equi-distant apart on bodies that have the same diameter. On tapered bodies, the spirals should be progressively wider as one winds from the rear to the front of the body. A little experimenting on the part of any tyer will soon iron out this trouble.

Diagram No. 12

There are many methods commonly used for fixing dubbed bodies. Diagram 12 shows the easiest and best method. After the tail is secured, work the tying silk to the position shown in the diagram, one-fourth up from bend. Now, hold the tying silk taut, with left hand three or four inches below shank of hook. To attach the dubbing to the tying silk, take a little fur between the thumb and finger of right hand and lay it on the under side of tying silk close to the shank of the hook. The index finger, at the first joint, should be placed under the dubbing to hold it against the tying silk. Now squeeze tightly with tip of thumb as shown in diagram, and spin smoothly until tip of thumb reaches beyond end of index finger. Reverse operation without releasing pressure. Release thumb and finger; then take a little more dubbing and spin on below first. Repeat until you feel you have enough for the body. I like the dubbing to be spun on spindle shape with a longer taper at each end as shown in Diagram No. 13. After you have dubbed several dozen bodies, you will have no difficulty judging the correct amount of fur to use. Some feel wax is beneficial if applied to the tying

silk before spinning on the dubbing. However, I believe they are following an old tradition passed on by the English tyers who did not have the advantage of a bobbin. I have no use for wax of any kind for any fly tying operation.

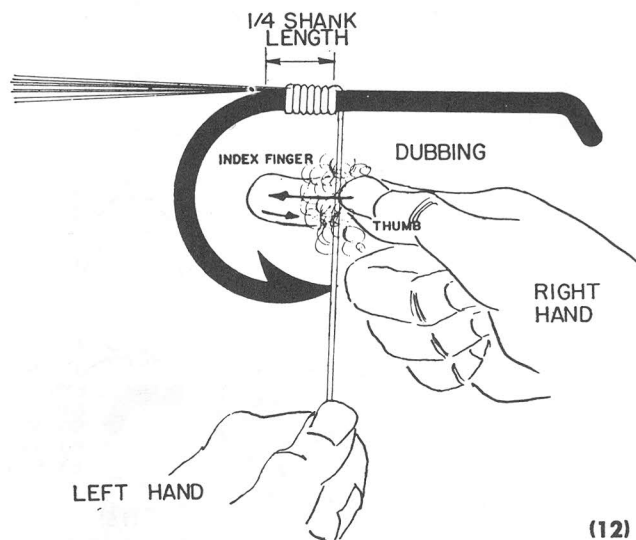
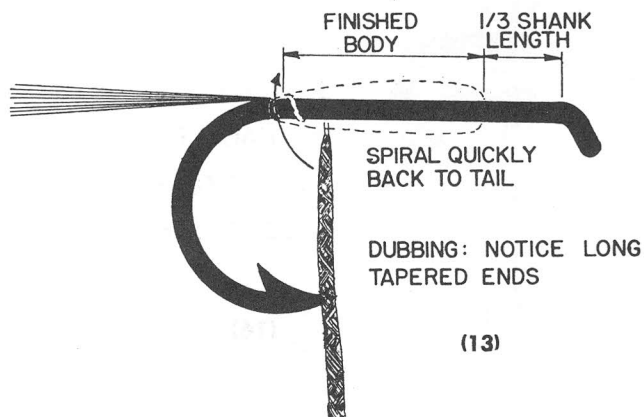


Diagram No. 13

You now have the fur secured to the tying silk. Notice you have a little space between top of dubbing and shank of hook. Take bobbin in right hand and take up excess tying silk until dubbing just reaches the neck of the bobbin. Wind back free tying silk to bend of hook and wind body just prepared toward eye, building up body with slight taper as shown by dotted line overlapping if necessary. Stop one-third distance back of eye. If you have too much dubbing for the size hook you are tying on, pick off excess with thumb and finger of right hand. If you want the body to be fuzzy, as is often the case, take a dubbing needle and pick out fur until you have the desired effect.



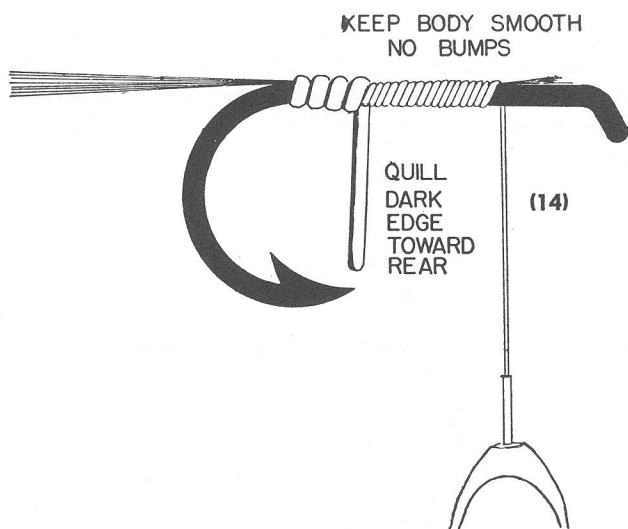
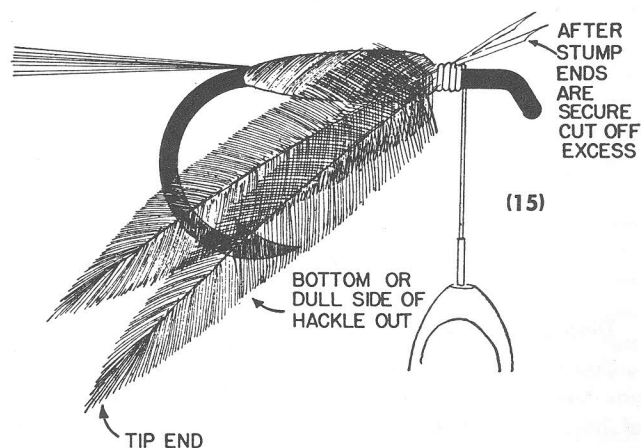


Diagram No. 14

Quill bodies are quite easy to wind after one acquires the "light touch." I feel it is best not to start tying patterns with this type of body until you have tied several dozen flies. When using peacock eye quills as diagrammed, tie quill in by butt end so that dark side faces rear of fly. Be sure the shank of hook is smooth since this quill is not very substantial, many tyers rib it with fine gold or silver wire. You can rib it either clockwise or counter-clockwise. This greater strength of wire will help prolong the life of this quill body.

Diagram No. 15 and No. 16



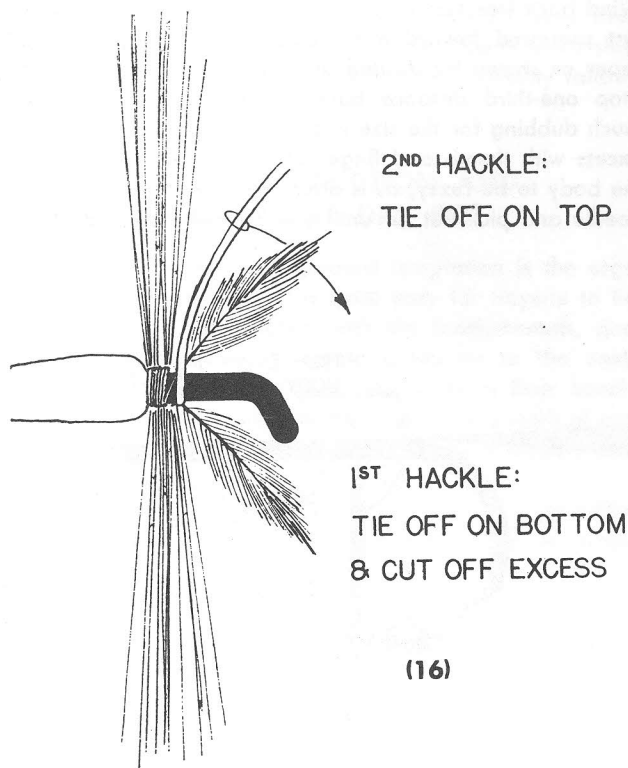
We are now ready to tie a hackle dry fly. Remember, this dry fly is being constructed so that it will float on the surface of the water. Be careful in the selection of hackle. First of all, the tail material should be from a large hackle (preferably throat hackle) with clear, stiff fibers. Instead of using only a few as you did in the wet fly, tie in enough to hold the hook clear if placed on a flat surface. Now, build up the body. Select two hackles for the size hook you are tying on, and strip off the fuzzy part at the stump end; in fact, you should strip off the bottom third. Otherwise, you will have trouble because a heavy quill makes the hackle very unruly to wind and it will be very difficult to make the fibers stand perpendicular to the shank of the hook. Tie in as diagrammed with the dull or bottom side facing out. Many tyers lay the hackles back to back, but I find a better fly results if they are tied in as described above.

Now, take the top hackle and wind as close together as is possible, with dull side facing eye. Do not continue winding until tight up against eye. If the hackle is wound too close to the eye, you will not have room to properly finish the head. Tie first hackle, when wound off on under side diagram (16). Take second hackle and make one complete turn against rear of first hackle, then work up through first hackle toward eye and tie off on top. It is a good idea to move the hackle pliers back and forth at the same time you are winding the hackle. This will help to avoid bending down the fibers of the first hackle. Complete fly with half hitches or whip finish (Diagram No. 18).

Diagram No. 17

The "palmer" type dry fly is just a term used to describe the hackle-ribbed body of a fly. Some patterns are tied without and others with wings. Any kind of body may be used.

Before you start tying, let us discuss the ribbing hackle. Some tyers always tie in hackle by the tip end and some go so far as to strip fibers from one side. On some hackle, the fibers will be progressively longer from tip to butt end as (1), while on others the fibers on the upper two-thirds of the hackle are quite even in length as (2). To me, this variation in fiber length is the determining factor in how I tie in the ribbing hackle. If the hackle is decidedly tapered, tie in by tip end. However, first hold hackle by tip and stroke fibers down toward stump end. This will allow you to tie tip end without having too many fibers tied under.

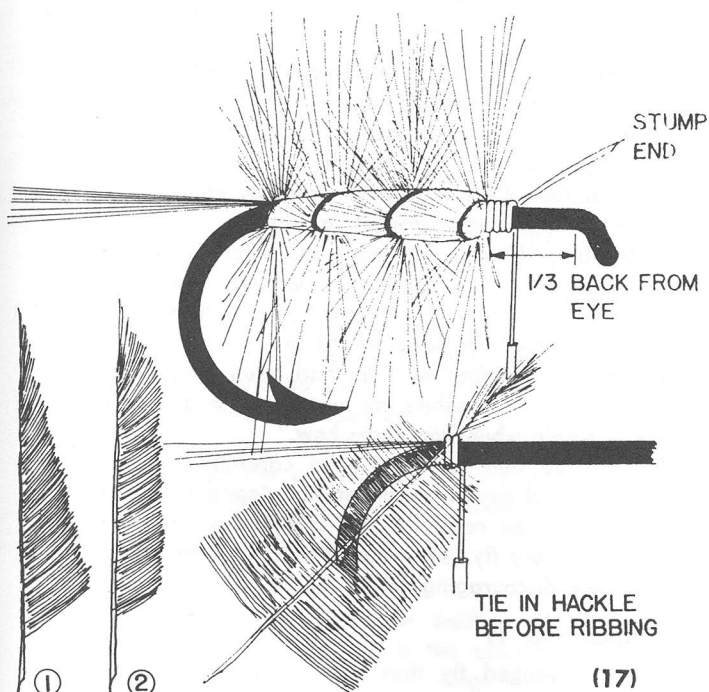
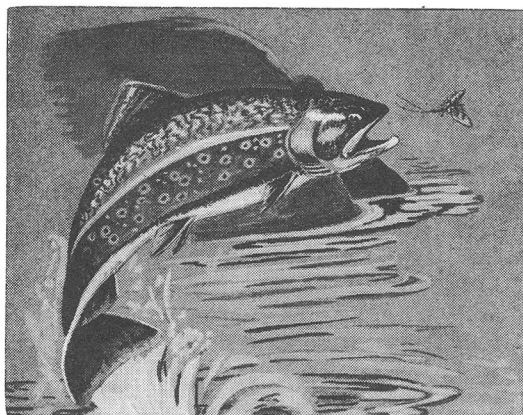


If I have a relatively even fibered hackle, I remove the webbing at the stump end and tie in by stump end. I do not stroke fibers back with this hackle as I believe this stroking appreciably weakens the hackle fiber. In both methods, hackles are tied with the dull side out so that the dull side will face the eye when the ribbing is complete.

When tying a "palmer" wet fly, the top or shiny side of the hackle is out and faces the eye when the ribbing is complete.

Before starting to tie this fly, carefully study Diagram No. 11. Hackle is now taking the place of tinsel or ribbing used in Diagram II.

Now we are ready for the actual steps. First, tie in the tail; next, the ribbing hackle; and last, the body material. Wind on body material and tie off one-third distance back

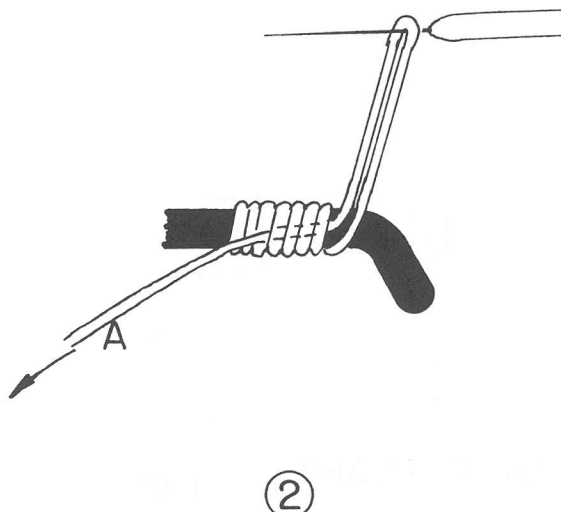
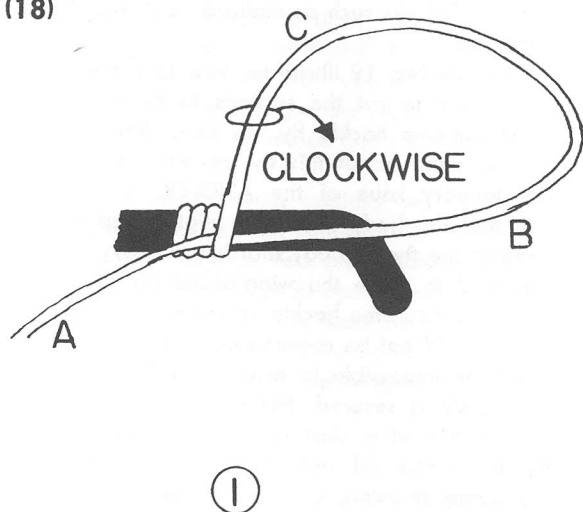


of eye. Take hold of ribbing hackle with hackle pliers and immediately begin to spirl. As soon as front end of body is reached, tie off. The reason for this procedure was thoroughly explained under diagram No. 11. Complete fly as described in diagrams No. 15 and No. 16. Be sure that front hackles are tied in so that when they are wound on they will make contact with the ribbing hackle. There should be no space between ribbing and front hackle.

Diagram No. 18

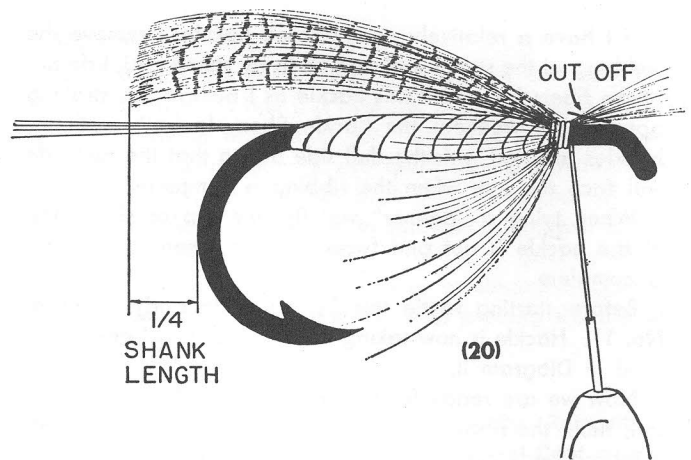
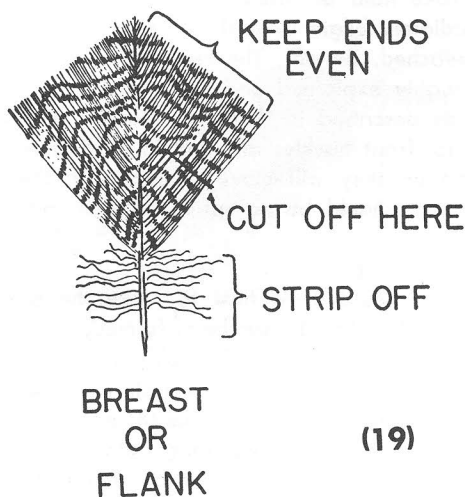
Every tyer should know how to make the ship finish. After the head of the fly has been formed, throw on one half hitch. Form loop as in (1), holding top of loop (C) between index finger and thumb of right hand and bottom (B) with left hand. After (C) clamps (B) against shank, let go of (B) and wind clockwise using both hands to make additional turns. Each turn must go over tying silk between (A) and (B). When sufficient turns have been made (four or five), insert dubbing needle in loop, hold firm and draw tight by pulling at (A). Slip needle out as knot pulls tight. There are special tools for this now but, with practice one can tie it more quickly by hand.

(18)



WING TYING TECHNIQUES

Many fly tyers and fishermen contend that wings are useless and do not add to the fishability of a fly. I am sorry that I am unable to defend this though because wings seem to belong on every fly. Most of the flies we fish with today are tied with wings. Bi-visibles, hackle flies and some plamer flies have no wings. It may be of interest to know that of my many fly-tying acquaintances (and they number in the thousands), the only ones who admitted they saw no use for wings were the ones who could not tie a decent fly with wings. I might add that the true artisan would never think of omitting the wings on a pattern that called for wings.



Not long ago, an elderly man who had been tying flies for many years dropped in to see me about his fly-tying problem. Yes, you have guessed correctly; his trouble was "wings." Like all fly tyers, he produced a box containing a sample of his handiwork. His flies were exceptionally well tied in every respect, except the wings, which were terrible. When I told him I could remedy all of his troubles in just a few minutes he looked, and I believe he thought, "You don't know me." Nevertheless, in less than an hour he had mastered the few fundamentals and was tying winged flies as if he had been tying them all his life. When we finished, he turned to me and said, "It really is simple when you know how."

This is true and any tyer who carefully follows the illustrations and explanations can tie winged flies. Let me caution you to be careful in the selection of the material you use in every fly. Poor material is hard to work with and is very discouraging to the beginner.

Diagram No. 19

The first winged fly that I will describe will be the simplest to tie. The most common feathers for this type of wing are the breast and flank feathers from various species of ducks such as mallard, teal, wood duck, canvas back, etc.

Diagram No. 19 illustrates how to prepare the feathers and where to cut the sections to be used. First of all, tie a common hackle fly. In case there is any question in your mind about this fly, review diagrams 3 to 10 in the January issue of the ANGLER. Let me remind the tyer that the body should be slightly tapered toward the head of the fly. A body that is too heavy at the front end will tend to make the wing stand up too high. Be sure you do not run the hackle up close to the eye of the hook or there will not be room to tie on the wing or wings, and it will be impossible to properly finish off the fly. When the hackle is secured, better throw on one half-hitch so that, if the wing slips or must be removed for another try, the hackle will not come unwound. With the preceding points in mind, you are ready to begin. Now take scissors and cut off the hackle fibers on top of the fly (Diagram 19). This cutting is optional but seems to make

a neater fly. Take breast or flank feathers and strip off downy area at the bottom and up from stump end until the fibers are uniform in quality, and as near the same length as is possible, in the area you are going to use. Keep ends of fibers even. Cut out section and roll together so the fibers are all in one bunch.

Diagram No. 20

Now hold by butt end with thumb and index finger of right hand. Lay along top of hook so you can see how long the wing will extend beyond the hook. Most wet-fly wings should be about one-fourth longer than the hook. Now, trade hands and tie in close up against the hackle using the same procedure as was used to tie on the tail (Diagram No. 4). As soon as the wing is secured with several turns, cut off as diagrammed (Diagram 20). Make enough turns to cover up material and finish off in the usual manner.

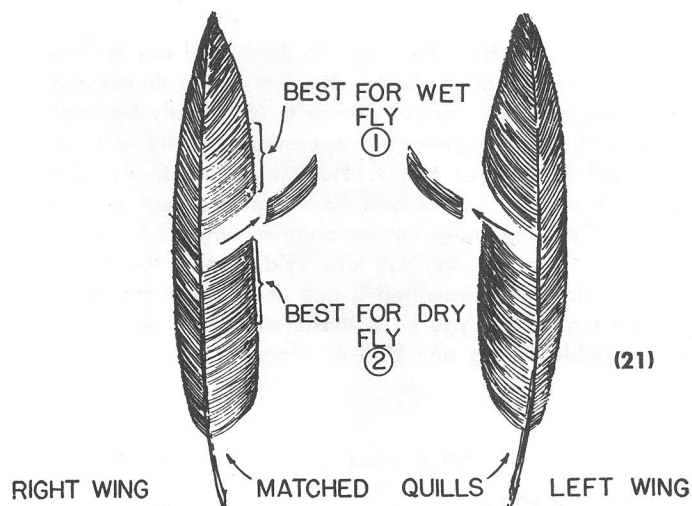


Diagram No. 21

Wing quills are most frequently used for the wings of wet flies. Many species of birds have suitable quills. Duck wing quills are probably more commonly used than any other; at least, they are the best for the beginner to practice on because the fibers hold together quite well. Study Diagram No. 21. Notice that the center half of the quill is usually the best. Select two matched quills; by this we mean one quill from the left and one from the right wing. They should be as near the same size as is possible. Now cut a section from each quill about three-fourths as wide as the gap of the hook you are tying on. The tendency is for the beginner to get the wings too wide. Now place wings so the concave surfaces are facing each other.

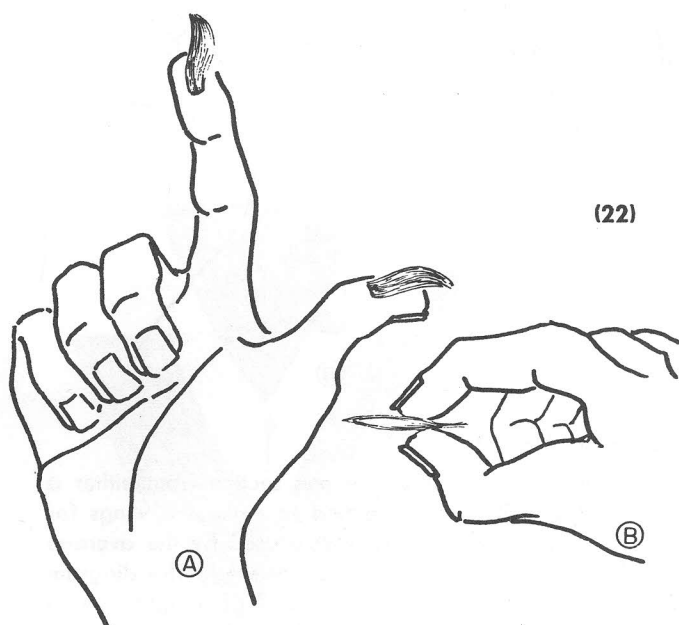


Diagram No. 22

This diagram illustrates one method of placing the wings together. I believe it is the easiest and quickest way for anyone to get the two wings together. Moisten the thumb and index finger of the right hand. I use my tongue. Notice the angle at which they adhered to the thumb and finger. This angle is right for me but may not be for you if your finger and thumb differ from mine in angle of grasp. Experiment until you find the correct angle. When the thumb and finger are closed, as (B), the tips of the wing section should match and the sides should be even.

If you have placed the wing sections on thumb and finger as diagrammed in (A), the contour of the fibers will be down. The wings may be tied on in this manner or reversed so that the tip ends point up. However, if they are pointed up, one usually holds them by the cut ends in the right hand and gently strokes the tip ends down with the left. This gives nice, rounded end wings.

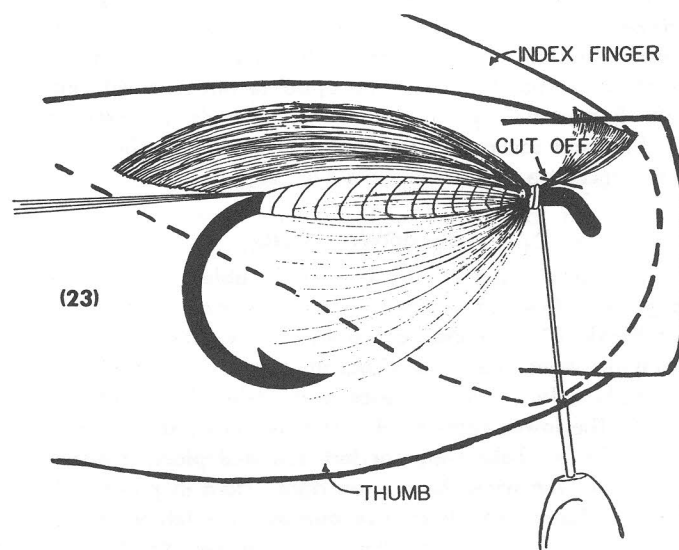


Diagram No. 23

This is the closed wing wet fly.

Hold the wings between the thumb and finger of the left hand. Check diagram carefully for the correct position. Note that the thumb and finger straddle the shank

of the hook and that the wings lie down and are in contact with the top of the body. The tips of the thumb and finger, when closed, should extend to (or slightly beyond) the eye of the hook. All other operations are the same as described in diagram No. 4. Hold the wings firmly until they are secured. Once you have made a turn or two around the wing, never make another turn back of the first one. If you do, this will turn, fold, or split the wings. The technique just described is one of the most important in fly tying. Once you have mastered it, you will never have trouble setting any kind of wings.

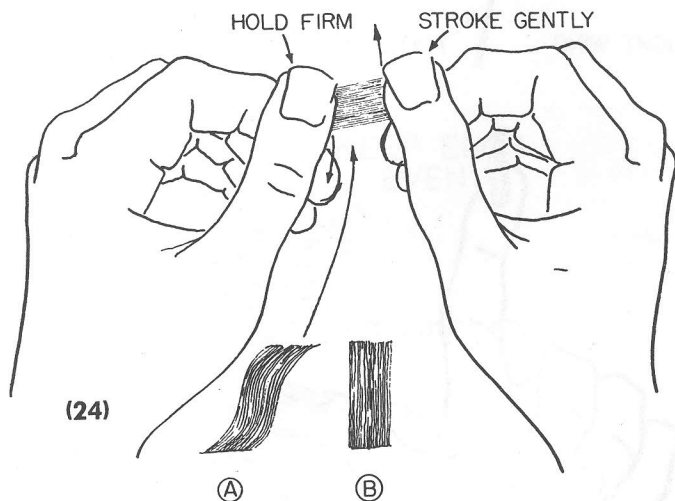
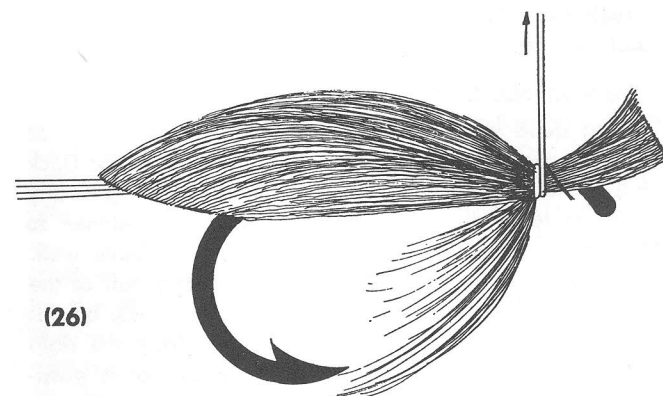
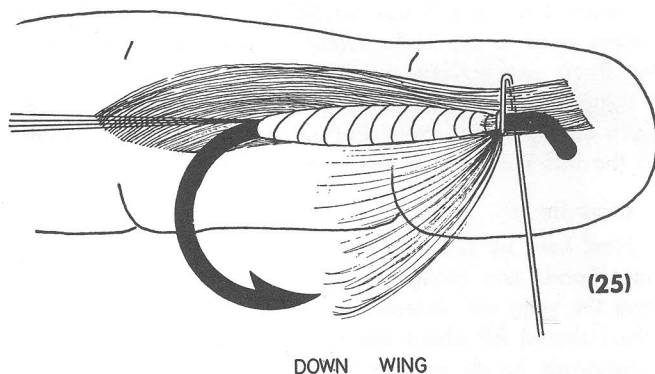


Diagram No. 24

This diagram illustrates how one section from either a right or left quill may be formed to make the wings for a wet fly. This technique is seldom used by the average tyer, but is quite simple once it is mastered. This diagram illustrates how a section from the quill of a right wing is formed. Cut section (A) and hold firmly in both hands as illustrated. Now move hands slightly in opposite directions. Next, hold firm by cut end (left hand) and gently stroke tip ends up between thumb and finger of right hand. Reverse the operation by holding the tip with the right hand and stroking in the opposite direction with the left. Repeat this operation until the tip ends are even as in (B). Fold section (B) longitudinally in the middle. Follow procedure under Diagram No. 23.

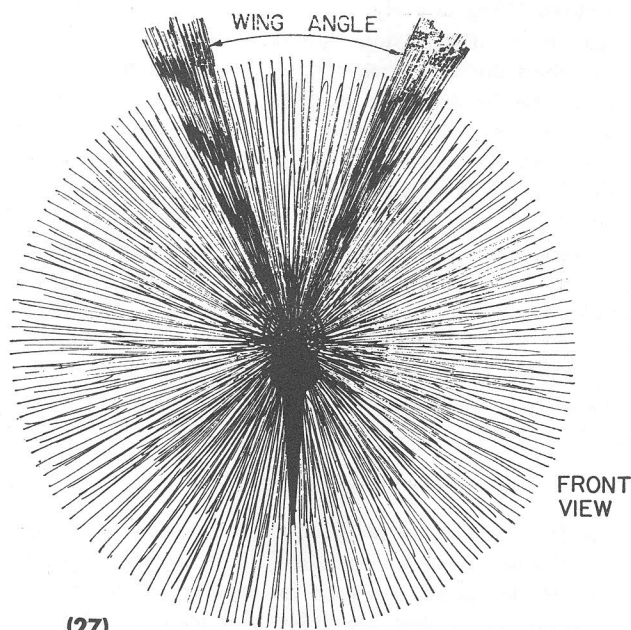
THE DOWN WING

The down wing is quite often troublesome for the beginner. After the body and hackling are finished, cut off hackle fibers along both sides (this is optional). Take wing for right side as in Diagram No. 25 and place on opposite side. Hold in place with index finger of left hand. The lower edge of wing should come just to bottom of the body. Take wing for left side and place it opposite, and even with, the one on right. Hold in place with thumb. (Note: For illustrative purpose, the left wing has been omitted. For its position, see Diagram No. 26).



Bring tying silk loosely up between thumb and wing, over top of wing and down between the wing and index finger, then up between thumb and wing. Close tips of thumb and finger. Hold firmly and tighten by pulling silk up as in Diagram No. 26. After you have had some experience with this wing, you may find that you will be able to tie in this wing as described for the closed wing. I only suggested the preceding method because beginners usually have more success using it. There are many other styles of wings, but if one can tie those described in this article, he or she should have no trouble with the rest.





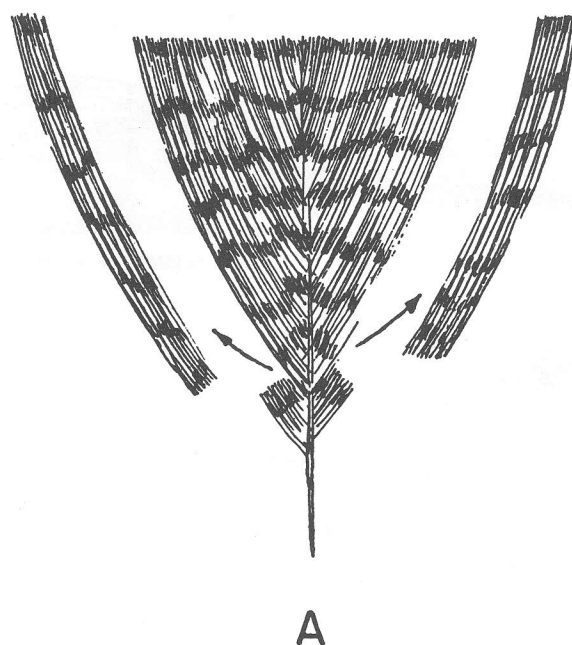
THE WINGED DRY FLY

The winged dry fly is tied so that it will float on the surface of the water. However, it is supposed to float with the wings either in an upright, or spent wing position, depending, of course, on how it was originally constructed. With the winged dry fly the tyer must pay more attention to detail than with any other type of fly. For the standard fly tied on regular length shank hooks, the hackle should be sized carefully. The wings usually give the beginner the most trouble. Remember, it is better to have the wings a little short than too long. Wings that are too long will make the fly top-heavy and will have a tendency to spin and twist the leader when one is casting. The tail should be as long as the shank of the hook (exception, short and long-shanked hooks), and stiff enough, along with the hackle, to support the fly. The body of the fly should be slim rather than heavy.

Always keep in mind that no matter how well dressed the fly may be, it is no better than the material used to construct it. Always use the best material available and continually strive for perfection.

Diagram No. 27

Diagram No. 27 illustrates the approximate length and angle to cock the upright wings on a dry fly. It would be well for the neophyte tyer to study the diagram and simulate the angle as closely as possible. One should realize that there may be considerable variance with each hook size insofar as the length of the wing is concerned because the length of the wing is usually about one-fourth longer than the hackle. The tendency is for the beginner to make the wings too long and, when this happens on the dry fly, it becomes top heavy and does not ride the water as it should.



(28)

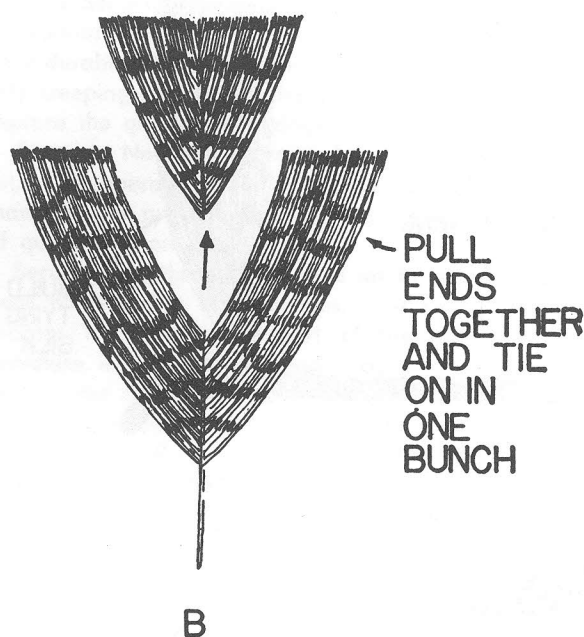


Diagram No. 28

This diagram illustrates the most common methods of preparing breast, side or flank feathers of the various ducks for the divided wing. First, one should select a feather that is well marked and of uniform quality. Now strip off all soft and downy fibers. If the feather is large, sections may be cut from either side (A), and placed together so that the ends are even. Sometimes one may be able to get enough from one side of the feather for the wings, thus eliminating cutting from each side. When the feathers are small and only have enough fibers to make one pair of wings, the best method is to cut out the center as illustrated (B). The length of wings determines how far back to cut out the center section.

DIVIDED WING

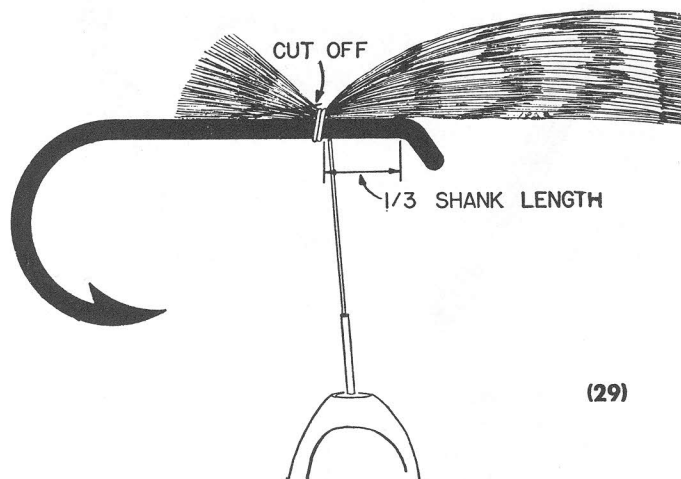


Diagram No. 29

Divided Wing Dry Fly. We are now ready to set the wings. First, attach tying thread to hook and wind up to one-third distance back of eye. If sections cut from the side of the feather are used, be sure the ends of the fibers are even. Roll together and hold in compact bunch between thumb and finger of the left hand with the tip ends on the outside. The fibers are held in the opposite position from the way they are held when tying in the tail. The solid bunch of fibers is tied in approximately one-third of the distance back of the eye, using the same technique as described in Diagram No. 4. Remember, the wings should be about one-fourth longer than the length of the fibers of the hackle on this fly. Make enough turns to hold the fibers fast, then cut off excess on angle as illustrated.

NOTE: I have not illustrated the hair and spent wing flies. The hair wing is tied exactly the same as the divided wing. Hackle points are used for most spent winged flies. Tie wings on so that top sides of hackle are together. Now separate wings and crisscross between them, at the same time holding wings in spent position. Make enough criss crosses to hold wings in spent position. The rest of the procedures are the same as the ones just described.

DIVIDED WING

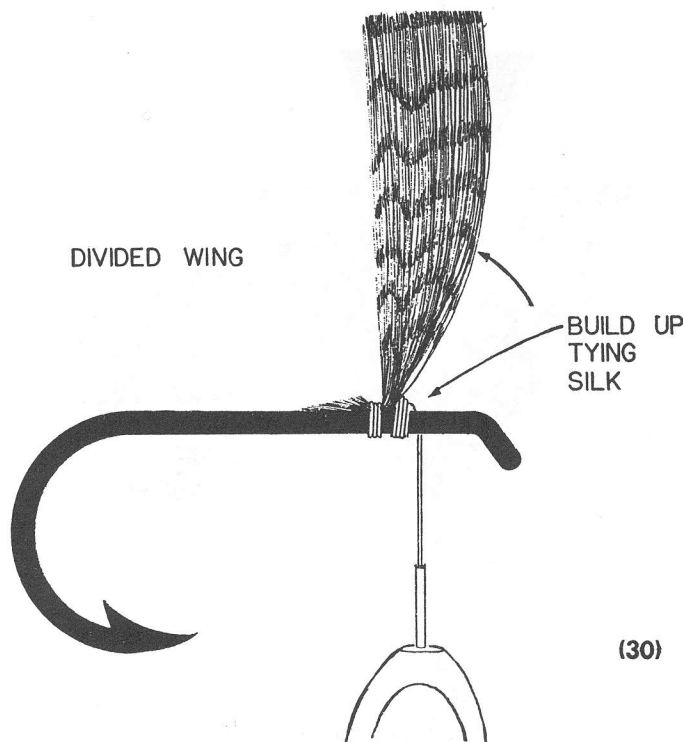


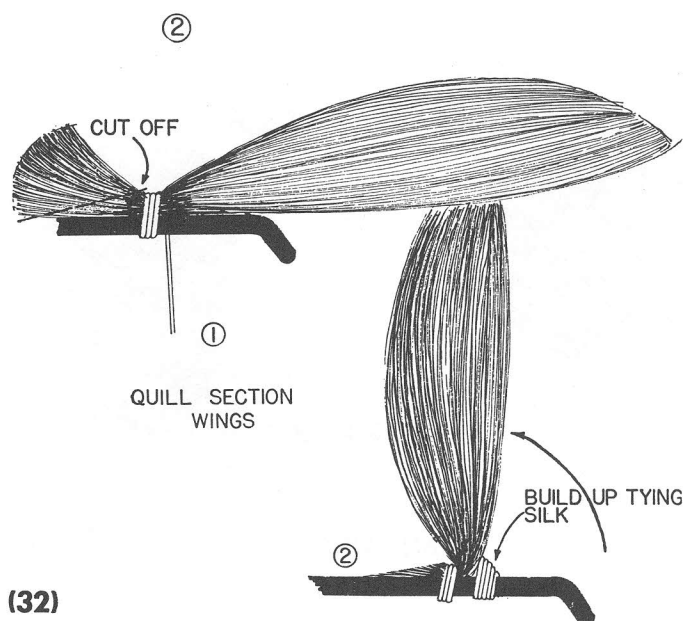
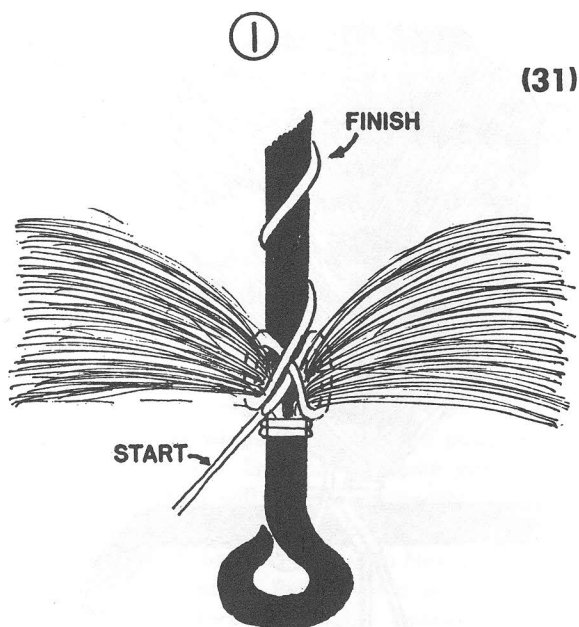
Diagram No. 30

Diagram 30 illustrates the next step. Grasp wing material and pull to upright position and wind tying silk in front of the wings. Make enough turns tight in against base to form a wedge that will hold wing material perpendicular to the shank of the hook.

Diagram No. 31

(1) Use both hands and separate fibers into even bunches. The tying silk is now at the position labeled, "start." Hold wing on left side and wind back between wings. Let wing go on left and grasp wing on right side, and wind in under shank at rear of wings; then back across to the front and under to starting position marked, "finish." Cock wings as illustrated in Diagram No. 27, and repeat winding thread in criss-cross pattern until wings cock at the desired angle. Usually two or three turns are sufficient. After the necessary criss-crosses have been made, you should end with the silk in front of wings as in "start." (2) Now grasp wing on left side with thumb and index finger of left hand and cross silk back between, and to the rear of right wing. Release left wing and grasp right wing. Bring silk around base of right wing and across on top of shank, and back between wings to rear of left wing. Release right wing and grasp left wing and wind thread around base and back between the wings. Now, spiral silk back along the shank of the hook. If too much tension is applied during this last operation, the silk will bend the wings and slip off, or will pull them too close together. When you finish, the wings should be cocked approximately as illustrated in Diagram No. 27. After several pairs of wings have been set, one is usually able to judge the correct tension for this operation.

The tying silk is now spiralled back to the center of the shank and the tail is tied in. Be sure to tie in enough tail fibers to support the weight of the fly. Since this is



(32)

Diagram No. 32

Quill Section Wings. The quill section winged dry fly is gradually losing its popularity simply because it is not very durable. The spent and hair winged flies are gradually creeping in, and I believe you will eventually see them replace the quill section wings wherever it is possible.

Diagram No. 32 illustrates how this type of wing is set. This operation should not be too difficult because many of the procedures are quite similar to the setting of quill wings on the wet fly.

Secure tying thread and wind up to one-third distance back of eye. Cut wing sections. It is best to take these sections from the lower part of the quills, where the curvature is more pronounced. Lay sections together so that convex sides are against one another. Tie in as illustrated (1), one-third distance back of eye. There is one important detail to remember. When you grasp the sections between the thumb and index finger of the left hand, grasp them in such a way that, when they are held on the top of the hook and the thumb and finger are squeezed together prior to tightening up the thread, the ends of the thumb and finger are at least up to, or slightly extending over the eye of the hook. This procedure prevents separation and roll of wing fibers. As soon as wings are secured, cut off excess stump end. Next, grasp wings firmly as close to the hook as is possible and pull to upright position (2). Now, build up wedge of tying thread in front to hold wings in perpendicular position. If the wings need to be separated, criss-cross as in Diagram No. 31, (1). Never "figure-eight" around base of wings as (2) in Diagram No. 31. This criss-cross should be made very loose. Grasp the base of the wing between the thumb and finger of the left hand and squeeze gently, using about the same pressure as when the wing was originally tied on. Tighten up criss-cross and then spiral thread back on shank, and finish fly as described in Diagram No. 31.

a winged dry fly it is a good idea not to run the body tight up against the wings. Leave a small space between the body and the wings. This will make it easier to tie in and to wind on the hackles. This procedure should be strictly observed when dubbing is used for the body.

Now tie in both hackles, as previously described, behind the wings. Wind on the first hackle behind the wings and tie off on the bottom in front of the wings. Follow directions under Diagram No. 16 for the second hackle, but try to have enough hackle to make two to four turns in front of the wings. The turns of hackle that are wound on in front of the wings should be kept as close to the wings as is possible. Complete fly with half hitches or the ship finish.

BREAST FEATHER

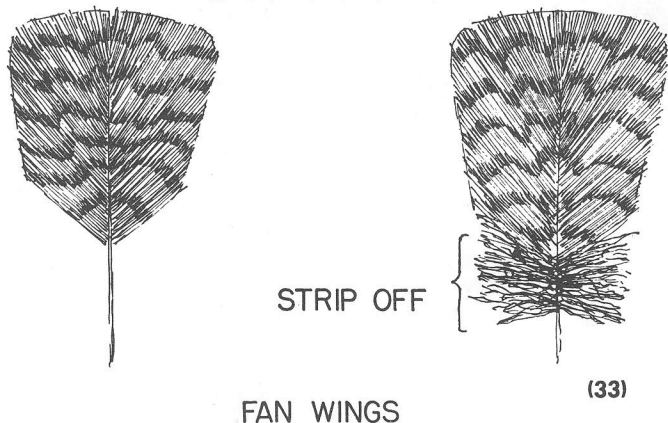


Diagram No. 33

The Fan Wing. Diagram No. 33 illustrates the way breast feathers are prepared for the fan-wing flies. Carefully match a pair of breast feathers and strip off down to the point where the wings are the correct size for the fly you are tying. Do not cut off quill. Now continue as described under Diagram 34 below.

FAN WING

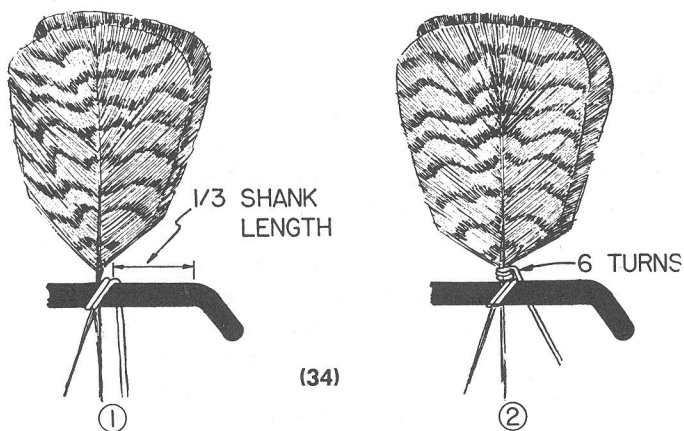
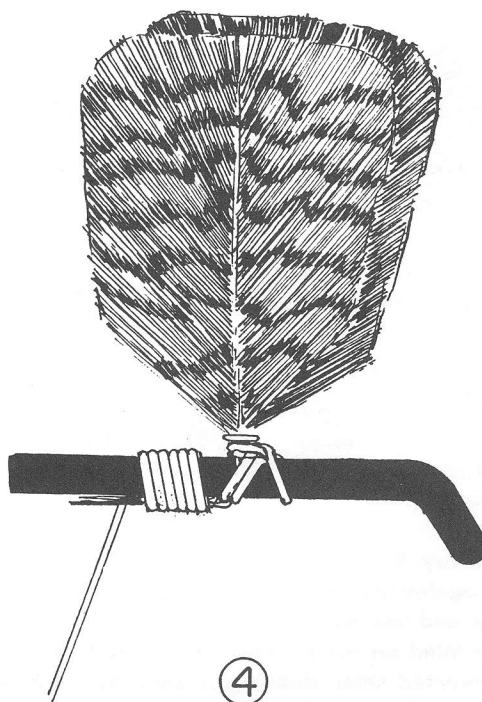
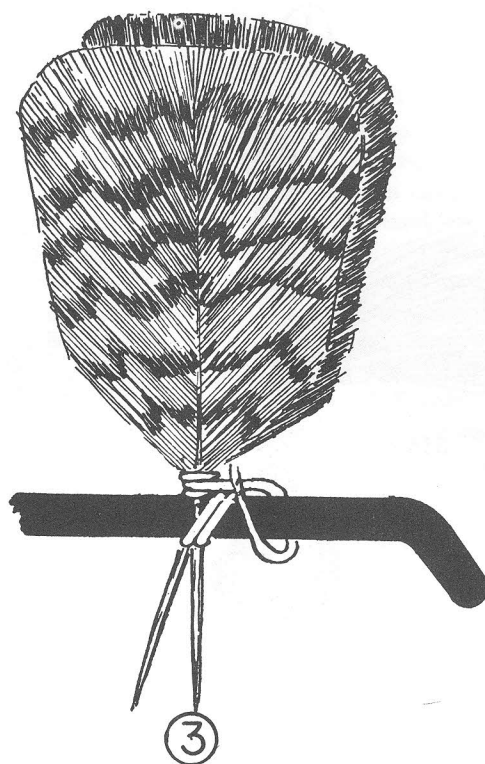


Diagram No. 34

Tying thread should be one-third distance back of eye. Grasp wings in left hand so that convex sides are together. Hold wings on hook so that the stems straddle the shank and a little of stem protrudes above the shank. Make enough turns to secure stems as in (1). Hold wings tight and make enough additional turns around stems above shank, binding them securely together (2). Brace wings by winding silk down around shank as diagrammed in (3). Be sure the wings are not cocked to the right or left, but are in perfect alignment with the longitudinal plane of the shank of the hook. In order to correct misalignment,



in case the wings are cocked to the right, take a turn or two clockwise around the base of the wings; then bring silk down under shank in front, applying enough tension to pull the wings into the proper alignment. If wings are cocked to the left reverse procedure. When the wings are perfectly balanced, pull stems up and tie fast to shank as in (4). Finish fly in the usual manner.

THE STREAMER FLIES

The feather and hair winged streamer flies are probably the most interesting for the beginner to tie. Many patterns are quite gaudy insofar as colors are concerned and really eye-catching in their beauty. Practically every conceivable combination of feathers and hair has been used to construct these flies, and the beginner can experiment at will. Strange as it may seem to some, it will be practically impossible to tie up any creations that will not take fish.

The streamer flies are usually tied on long shank hooks. No particular size or length is standard because in different localities and waters, larger or smaller flies are in order. The shorter winged streamers are popular in Pennsylvania; but in New England the same pattern tied on the same size hooks will have wings nearly twice as long. I suppose the reason for this is because the minnows that supply the bulk of the food for fish in New England waters are longer than those in Pennsylvania waters. Of course, there are many fancy and highly colored patterns that do not imitate anything and are, no doubt, taken by fish simply out of curiosity. These should really be called attractor flies. The streamer flies are by far the most versatile type of fly known today because any fish that will take any artificial lure can be caught on a streamer fly. This not only applies to fresh water fish but to all the salt water species as well.

These flies are effective because of the undulating action they produce when wet. It is well for the beginner to keep this in mind because if the fly is dressed too heavily, much action is lost. This loss of action is especially true with the hair winged streamers.

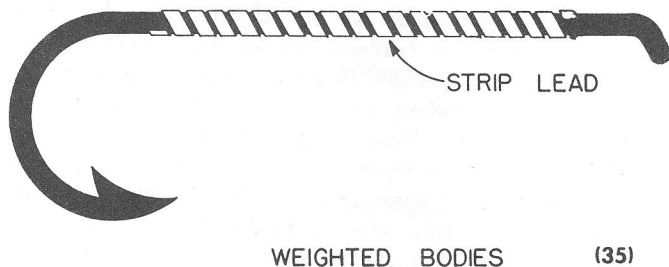


Diagram No. 35

Many streamer flies are tied with weighted bodies. Strip lead is generally conceded to be the best because it is flat and easy to work with. Any weighting material that is not flat makes the winding of smooth, ridgeless, tinsel bodies difficult. Lead may be purchased in sheets and cut into various widths suitable to the hook size. The lead may be wrapped compactly, or slightly spaced as in Diagram No. 35. The spacing you use depends upon the weight you desire to have in the finished fly. The lead may be wrapped on in precisely the same manner used in the building of bodies previously described. However, I prefer to spin on the strip lead, hence will describe this method only because I feel it is the quickest and best.

Grasp end of lead between thumb and finger of right hand, and hold lightly a bit farther back with left hand. Twist end in right hand one or two turns counter-clockwise around shank of hook just back of the eye. Now the lead is started. Keep feeding lead with the left hand and spinning counter-clockwise with the right-hand thumb and finger until you have the shank of the hook covered as in Diagram No. 35. Do not run the lead all the way back to the bend, or up close to the eye. Secure the tying thread back of the eye, then take a few turns over the first turn of lead, back of the eye, to secure the lead and keep it from spinning when the body is wrapped over it. All bodies with the exception of tinsel bodies are tied and wrapped on in the usual manner.

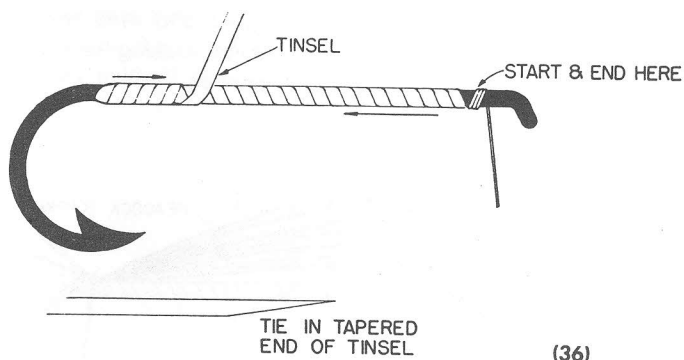
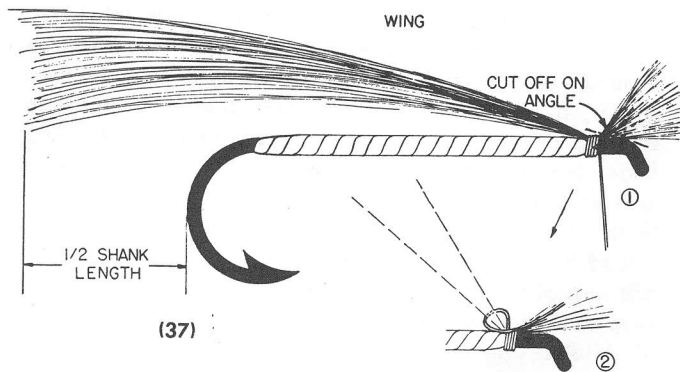


Diagram No. 36

Diagram No. 36 illustrates the technique used in winding on the tinsel body. First, cut one end of tinsel to tapering point. This end is tied in at point marked "start" in diagram. This tapered end makes it much easier to start winding the tinsel smoothly. Just to convince yourself, try tying in tinsel with square end and see how it is nearly impossible to start winding tinsel without causing a hump. Wind tinsel clockwise and close together over the lead base up to the bend of the hook; then return, as diagrammed, to starting point and tie off in the usual manner. If the tyer is going to tie several flies of the same pattern, it will save time if he ties all the bodies first. This is the procedure most professional tyers use. Of course, they may tie several hundred dozen of the same pattern.

Diagram No. 37

Diagram No. 37 illustrates the method of tying on the hair wing or bucktail type streamer fly. It is rather difficult to suggest an exact length for the streamer wing because in different localities the length of wing varies. I believe the most popular length is about one and one-half times as long as the shank of the hook. Cut section of hair near roots and hold by tip ends in left hand. With right hand pull out all short hairs and fur. Now hold by butt end and pull out long hairs, and put back in bunch so as to keep tip ends as even as possible. If you do not have an idea of the amount of hair to use for this wing, I suggest you purchase a hairwing streamer fly to use as a model.



Hold hair in the same manner as was illustrated for the tail, and tie in as illustrated. After hair is secured, cut off excess on angle as (1). Hold wing up and wind tying silk around base as in (2), and continue making several more turns over wing in the usual manner.

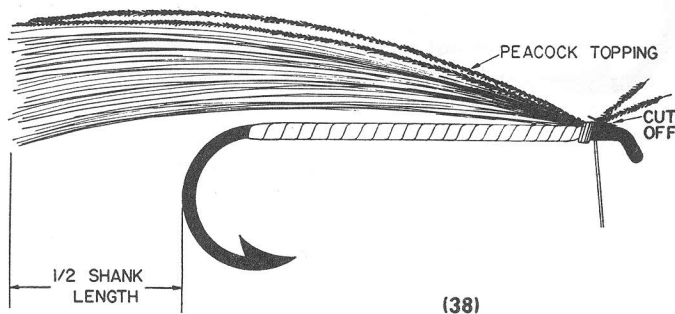


Diagram No. 38

On some hair wing patterns, topping is used. Quite often this may be peacock herl or golden pheasant crest feathers, but many others may be used, depending entirely upon the pattern. Tie in as illustrated in this diagram (No. 38) and cut off the excess.

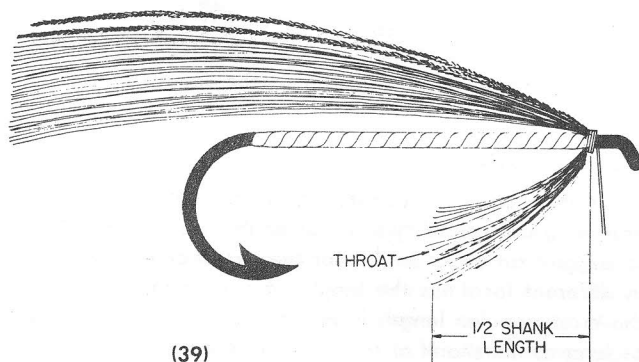


Diagram No. 39

The throat on the streamer fly is usually fibers from a large hackle, but fibers from many other feathers are used, depending upon the pattern. The length of the

throat varies but usually does not extend beyond the point of the hook. It will probably be easier for the beginner to take the hook out of the vise and turn the bottom side up before tying in the throat. It may be tied in by the same method as the tail. The experienced tyers never change the hook, but hold the material under the shank and tie it in from the bottom. I will describe this method. First, select material and cut to the desired length. Straddle shank of hook with thumb and finger of the left hand. Pick up throat material with right hand and transfer to thumb and finger of left so that the tip ends of the fibers point toward rear of hook, and stump end it at position where it should be tied in (right below wing). Bring tying thread down between finger and throat material, then up on the opposite side between the thumb and throat. Squeeze thumb and finger together and tighten by pulling up. This is just the reverse of the procedure used to tie in the tail.

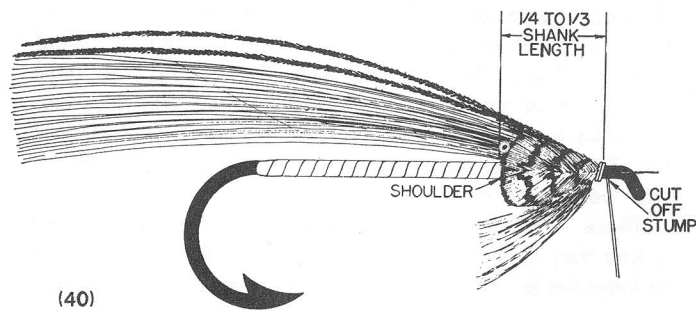
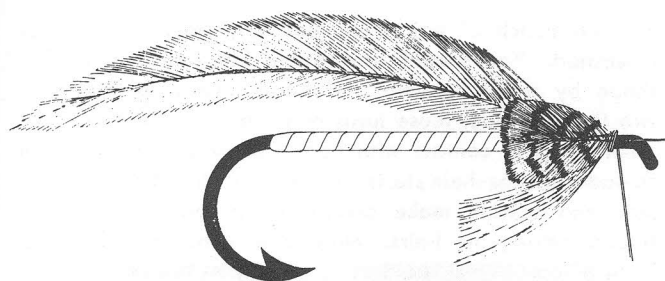


Diagram No. 40

The shoulder, cheek, or eye are all tied on in the same manner. Select two feathers with identical markings and as near the same size and shape as possible. Strip off the fibers until the feathers are the desired size. Do not cut the quill or mid-rib. Hold on side, and tie in by securing quill at point where fibers start with several turns of the tying thread. Now take hold of mid-rib and gently pull feather in to desired position as illustrated in this diagram. It is a good idea to pull the shoulder feather far enough so that a few of the fibers are just under the tying thread. This will help keep the shoulder from turning or twisting out of position. Follow same procedure for the other shoulder. Cut off excess stumps and complete by winding on enough tying thread to cover all visible material, and to give a nice smooth head. Finish in usual manner, and lacquer head any desired color.

Diagram No. 41

The feather wing streamer is one of the most popular and one of the best "fish-takers" of all streamer flies. I believe one can more closely imitate many of the natural minnows with this type of fly because of the wide variety of feathers and numerous-colored hackles one has to choose from. In addition, the undulating action produced



(41)

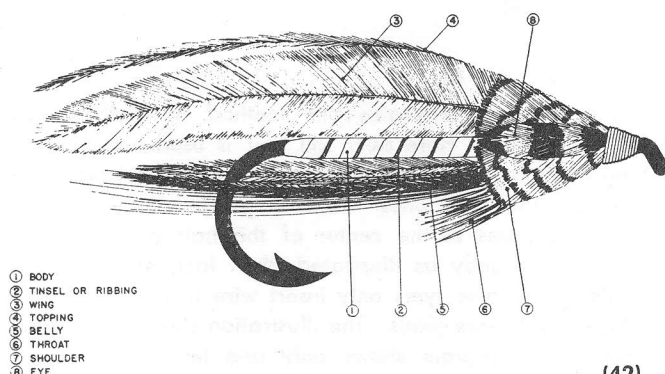
STREAMER

by the saddle hackle is very lifelike and, as a result, presents a very tempting lure for the fish.

Saddle hackle—the long, tapering, fine-quilled, or mid-ribbed hackle that hang down on the flank of a mature cock bird—are the best feathers for this type of fly. If none are available, the large neck hackles may be substituted. I would recommend, when using the neck hackle, to select necks that have slender-quilled hackles if possible. The heavy quilled hackles do not have nearly the undulating action, when fished, and are harder to work with.

First build body, then select matching hackles for wings. I usually use four hackles, two on each side, with the concave sides facing each other. Be sure to have ends even. Strip off excess fibers from stump end until you have the desired length. Hold in exactly the same manner as when tying in the tail. All other steps are the same as previously described.

COMBINATION BUCKTAIL & STREAMER



GRAY GHOST

(42)

ORDER IN WHICH MATERIAL IS TIED ON

Diagram No. 42

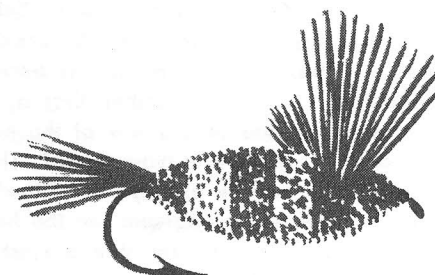
This diagram shows the order in which materials are tied on for a combination bucktail and feather wing streamer. I will describe the Grey Ghost, with red throat added.

(1 and 2) Body is orange silk floss ribbed with gold

tinsel. (3) Wing is four slate gray or blue dun matched saddle hackles. (4) Topping is golden pheasant crest feathers. (5) Belly is a term I use that is new to the fly-tying trade. I use it whenever any material is tied on the under side of a streamer that represents the belly of a minnow, and is approximately as long as the wing. The term, commonly used to describe this, "the throat," is not an adequate term because both "throat" and "belly" may be used on the same fly. The throat is really a beard-type hackle, rarely extending beyond the point of the hook. Four strands of peacock herl are tied in first, then white and yellow bucktail. (6) Throat is red hackle fibers. This throat description is added for illustrative purpose only. (7) Shoulder is silver or zebra pheasant breast feathers. (8) Eye is jungle cock neck feathers.

This article concludes the series on fly tying. May all who have profited by this series spend many enjoyable hours at the fly-tying table, and may all your creations when finished give you many tight lines.

TYING BASS BUGS



The name Bass Bug is quite misleading to the tyro. He usually associates these lures with the large and small-mouth black bass. It is quite true these lures were first constructed to take bass; but now they are universally used for all species of fresh or salt water fish that will take a lure on the surface of the water. Considering the great number of fish that will strike these large fly-rod bugs, it is only natural there should be a countless number on the market today.

There is one characteristic which distinguishes the "bugs" from fly-rod plugs. Hair or feathers used separately or together are part of the construction of the "bugs", whereas fly-rod plugs are usually made conspicuous by their absence.

Any fly tyer who is able to tie trout flies will find the bass bugs quite simple to make. Even though there are many different patterns, the techniques of constructing these various lures are quite similar. In this article I will cover only hair-bodied and cork-bodied lures. They are typical examples and the tyer who can tie or construct the ones illustrated should be able to imitate any of the others without much difficulty.

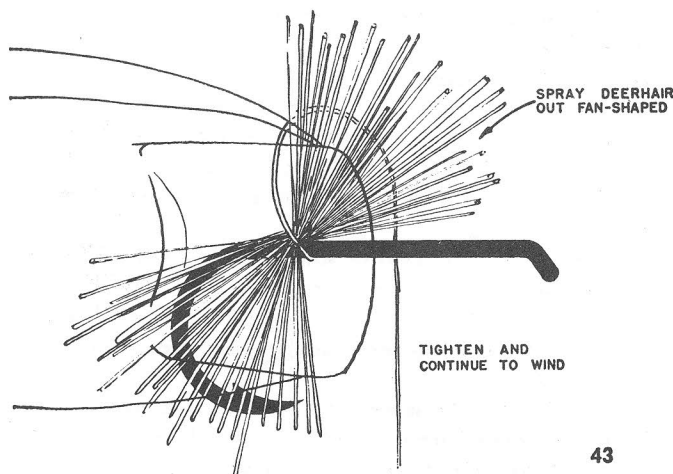
There are a few important fundamentals that should be remembered when making "bugs." First, be sure you have sufficient hooking space. By this I mean plenty of space between the body and the barb of the hook. If too little of the gap of the hook is exposed, it is very difficult to hook the fish. In addition the bug, in most cases, will not ride as it should with the hook in the water.

When tying "bugs" for your own use, construct them so they will work well with the rod, or rods, you intend to fish with. There is nothing more annoying then to try to fish with bugs so large they cannot be manipulated or cast properly. Beginners commonly make this mistake.

If you are duplicating a lure, be as exact as is possible. No doubt the original was satisfactory in balance and action and any slight change may ruin the action or floating qualities. Of course, many lures can be improved upon but the beginner does not yet know the proper proportion and the mechanics of construction.

HOLLOW HAIR BUGS

Antelope, big horn sheep, caribou, deer, elk, moose and reindeer all have hollow hair that can be used for hair bugs. However, one must remember that all the hair from any one hide does not spin on equally well. This is especially true with white tail deer hair. Select only the coarsest hair. Hair from the neck and back is quite fine and nearly impossible to spin; but is excellent for the wings. Beginners should remember that any hollow hair will spin easier on the bare shank of the hook than it will if the shank is covered with tying thread. The size of the tying thread one uses is usually determined by the size of the bunches of hair to be spun on the hook. The more hair one uses, the heavier the thread must be, and vice versa. Be sure the thread is heavy enough for the work you want it to do. It is well for the beginner to practice spinning on the hair before starting to tie hair bugs.



Practice until the hair spins on smoothly and evenly around the shank of the hook. Diagram No. 43 illustrates how this is done.

First secure tying thread at the bend of the hook, cut

a small bunch of hair from hide and hold on hook as illustrated. You should spread the hair out into a fan-shape by shifting thumb and finger. Now take one or two (I prefer one) loose turns of tying thread around hair where it is in contact with hook. Draw up on the tying thread until the hair starts to flare out, then let go of the hair and quickly make several more turns passing the thread among the hairs. Now wind tying thread to the front of hair. Next, hold at rear of spun hair with thumb and finger of left hand to keep hair from moving on shank; then with thumb and finger of right hand push hair together so that it will be as compact as possible. Repeat this process until shank of hook is covered or until you are satisfied you have mastered the technique.

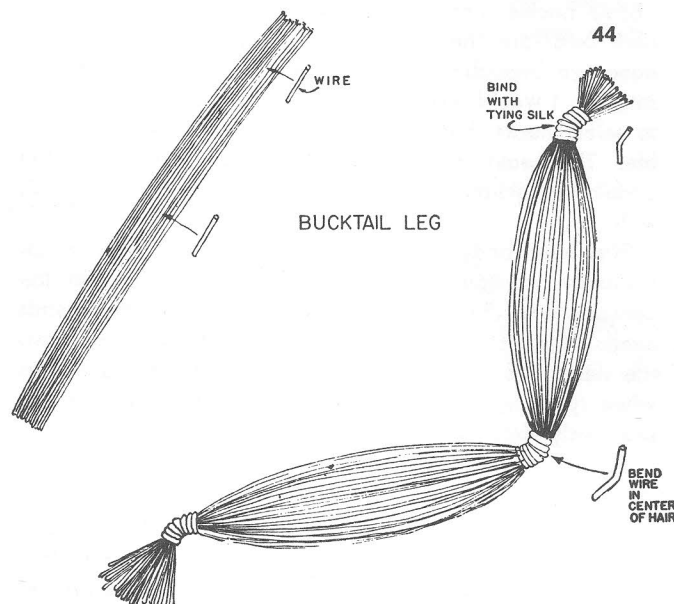


Diagram No. 44

This diagram illustrates one method of making legs for a hair frog. Here deer tail hair is used. Select hair long enough for the legs, then pull out all short hair and even up the long ones. Take a piece of spring steel wire and insert in the center of the hair as illustrated. Wind over tightly as illustrated; then lacquer and bend as desired. Some tyers only insert wire in the knee joint, others in all three joints. The illustration shows my preference. This Diagram shows only one leg. Two are of course needed.

Diagram No. 45

Diagram No. 45 illustrates how and where the legs are tied on the hook. Secure tying thread just in front of bend, then lacquer. Now tie top end of each leg to hook. After the legs are secured, one may run the tying thread to the rear of the legs and wedge the thread tight against the legs to make them stand out at a wider angle. This spread, of course, is optional. Cover all windings with lacquer.

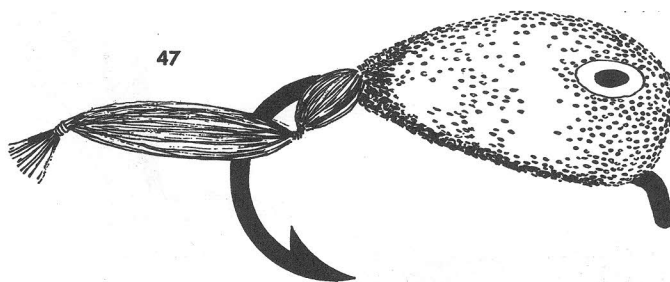
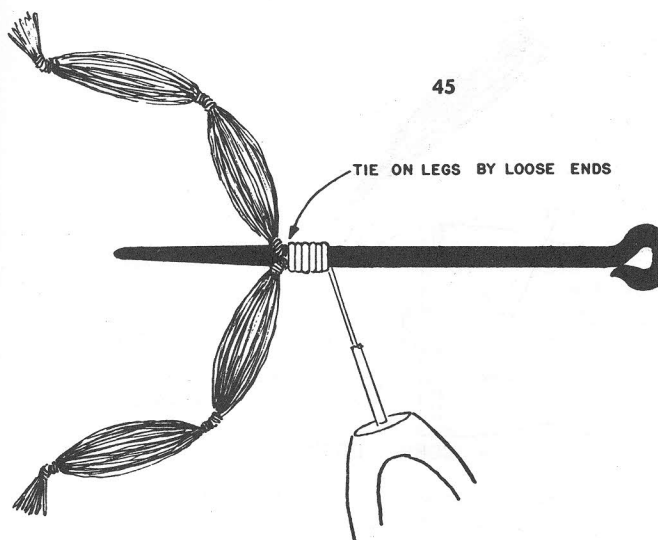


Diagram No. 46

This diagram shows the first bunch of hair spun on the hook after the legs have been tied on. I might add the first bunch or two of hair is the most difficult to spin on smoothly because of the tying thread on the shank. Be sure the hair is packed tight up against the legs. Repeat, spinning hair until the bare shank is covered with the desired amount. It is a good idea to apply a drop of lacquer or liquid cement to the shank where the hair contacts after each bunch of hair is spun on. This will help keep it from twisting on the shank of the hook.

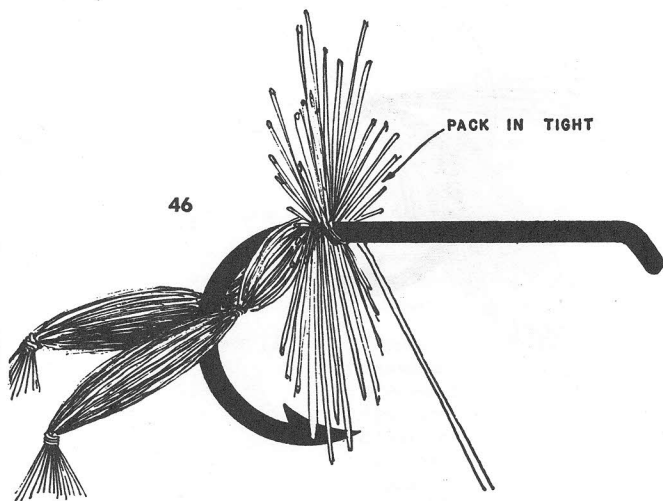
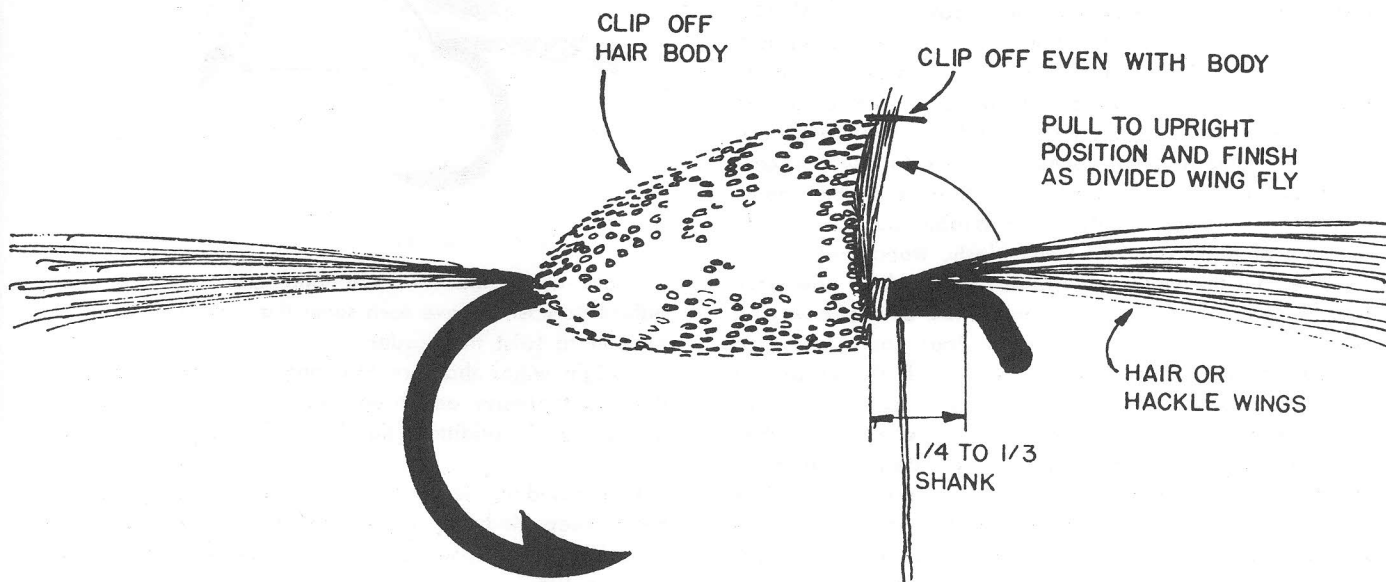


Diagram No. 47

One may go all out with his artistic sense when trimming hair frogs. I have never found that looks added very much to the fish-taking qualities of the frog. Diagram No. 47 just suggests one shape to trim the frog. Eyes may be added or built up with plastic and painted as desired.

Diagram No. 48

Diagram No. 48 illustrates proportioning of hair bugs. Single tail is tied on, then hair spun on up to one-fourth or one-third distance from the eye. Trim to desired shape. Tie in wings as illustrated. Wings are then divided as shown in Diagram No. 31 (April issue of Angler). Spin additional hair up to the eye of hook and trim.



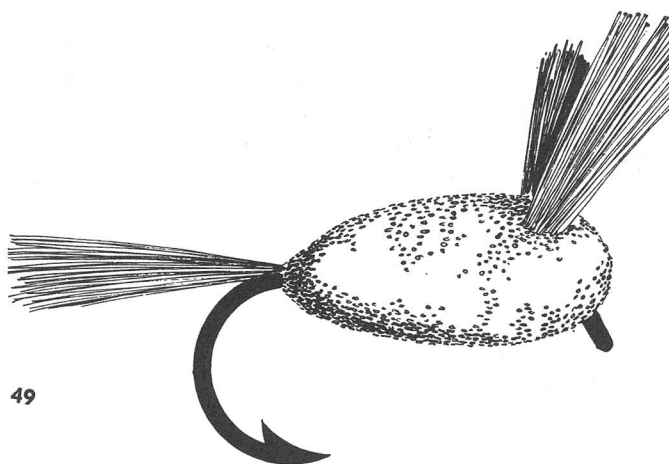


Diagram No. 49

Some tyers spin on exceptionally long hair when they get to the point where they want the wings; then when trimming the body, they just leave bunches of long hair for the wings. If the hair is uneven, it may be trimmed as illustrated. The wings may be tied or clipped at any angle on the body.

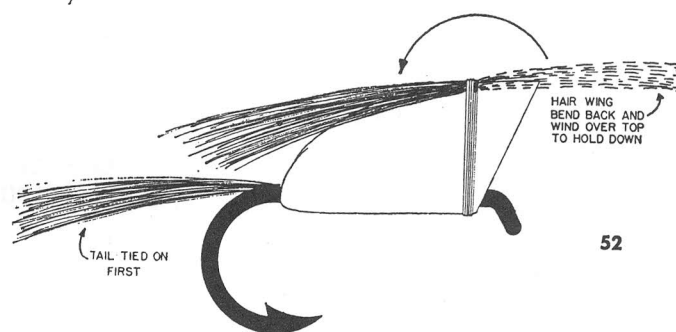
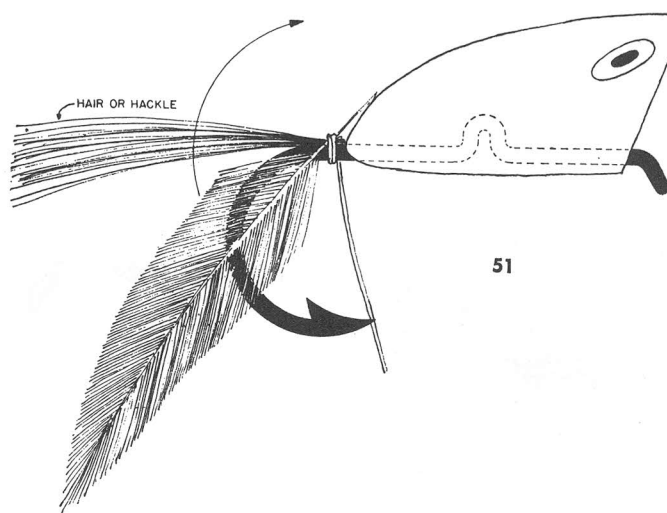
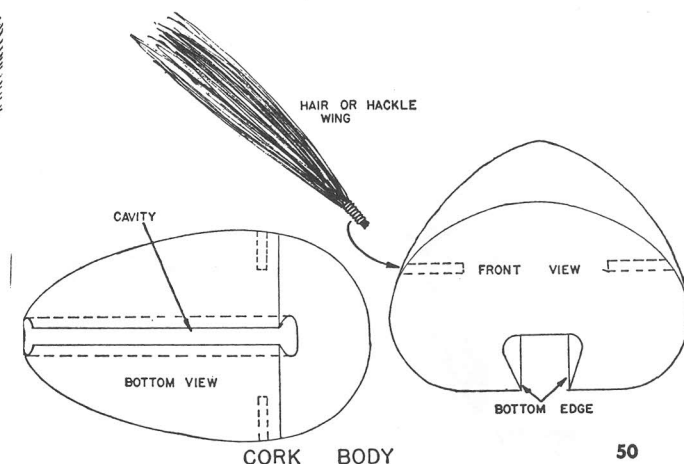
CORK BODIED BUGS

Diagrams No. 50, 51, 52

There are many different shapes and patterns of cork bodied bugs. Diagram No. 50 illustrates the steps in preparing a cork body for the hook. Bodies may be shaped by hand from cork cylinders; but one can purchase them already shaped just about as cheaply as the cost of the cylinders.

If you are going to make a number of bugs, it is best to prepare all the cork bodies in advance. Slots in the bottom may be cut with a razor or sawed; or small files may be used. I usually shape my slots as illustrated, making the entrance to the cavity just large enough to slip the hook into place. If the bug is to have a tail, tie it on the shank first and cover windings with lacquer or cement. Humpshanked hooks are best to use for cork bugs as they keep the body from turning on the shank.

Many different cements are available but be sure to use one of good quality. I mix plastic wood and cement together, fill the cavity, then insert the hook. I now pack and smooth off the surface and ends of the cavity. I allow it to set for at least twenty-four hours and then smooth off the surface with sandpaper. If the surface of the cork is pitted, it should be given a coat or two of filler. Some fill the pits with plastic wood and when dry, sand again. Paint or spray with desired color. If the pattern calls for wings, tie them on last; then lacquer windings. Small holes may be drilled in bug in any position desired and wings of hair or feathers inserted. Fill cavities with cement before inserting wings.



Spent wings that are too long and heavy are very difficult to cast. I have seen some that would actually spin enough to twist the leader.

Upright wings that are too long and heavy will make the bug topheavy and it will not ride with the wings up in the air. In addition, this bug will be very difficult to cast.

In concluding, let me suggest that the beginner had better keep his bugs on the small side. They are simpler to tie or construct, will be easier to cast, and more enjoyable to fish.

TROUT STREAM INSECT EMERGENCE TABLES

By CHAS. M. WETZEL

Common Name	Scientific Name	Habitat	Emergence Date
Little Black Stonefly (3)	<i>Taeniopteryx maura</i>	Pa., W. Va., Tenn., Mass., N. Y., Minn., Mo., Md., Kan.	Apr. 15
Red Quill (1)	<i>Ephemerella subvaria</i>	N. Y., Pa., N. J., Ont., Quebec	Apr. 16
Little Black Caddis (2)	<i>Epeorus pleuralis</i> , <i>iron fraudator</i> <i>Chimarra aterrima</i>	Pa., Can., N. Y., N. J., Del., Ind., Ga., Fla., Washington	Apr. 17
Red Legged March Fly (5)	<i>Bibio femoratus</i>	Pa., N. Y., N. J.	May 1
Smokey Alderfly (5)	<i>Sialis infumata</i>	Que., N. S., N. Y., New England, N. J., Pa., Wash., Mich., Ill., Minn., Calif.	May 1
Black Midge (5)	<i>Glyptotendipes lobiferus</i>	Pa., N. Y., N. J., Ont.	May to Sept.
Light Stonefly (3)	<i>Isoperla signata</i>	Pa., N. Y., N. S.	May 1
Penns Creek Caddisfly (2)	<i>Brachycentrus numerosus</i>	Well distributed through the northern hem.	May 8 to May 25
Black Quill (1)	<i>Leptophlebia cupida</i>	Pa., Ohio, N. S., Nfld., Ill., Can., N. Y., N. H., N. C., R. I., N. J., Ont., Quebec, Mass.	May 15
Early Brown Spinner (1)	<i>Leptophlebia cupida</i>	Same as above	May 16
Yellow Spider (4)	<i>Antiocha saxicola</i>	Well distributed throughout the northern hem.	May 15
Stonefly (3)	<i>Neophasganophora capitata</i>	Pa., N. Y., Md., Mass., Minn., Quebec, N. S., Ind., Ill., Mich., Kan., Tenn., N. C.	May 15
Spotted Sedge (2)	<i>Hydropsyche slossonae</i>	Pa., N. Y., N. H., Ill.	May 16
Pale Evening Dun (1)	<i>Ephemerella dorothea</i> and <i>rotunda</i>	Pa., N. Y., Can.	May 20
March Brown (1)	<i>Stenonema vicarium</i>	Pa., N. Y., N. B., N. H., Quebec, Tenn.	May 20
Great Red Spinner (1)	<i>Stenonema vicarium</i>	Same as above	May 21
Green Caddis (2)	<i>Rhyacophila lobifera</i>	Pa., N. Y., Ill.	May 21
Dark, Green Drake (1)	<i>Hexagenia recurvata</i>	Pa., N. Y., Mass., Me., W. Va., Mich.	May 21
Brown Drake (1)	<i>Hexagenia recurvata</i>	Same as above	May 23
Ginger Quill Dun (2)	<i>Stenonema fuscum</i>	Pa., N. Y., Ont., Que., New Brunswick	May 24
Pale Evening Spinner (1)	<i>Ephemerella dorothea</i> and <i>rotunda</i>	Same as Pale Evening Dun	May 25
Ginger Quill Spinner (1)	<i>Stenonema fuscum</i>	Same as Ginger Quill Dun	May 26
Fish Fly (5)	<i>Chauliodes serricornis</i>	Pa., N. Y., Md., Ga., Ohio, Minn.	May 26
Green Drake (1)	<i>Ephemerella guttulata</i>	Pa., N. Y., Tenn., Ont., Quebec	May 28
Black Drake (1)	<i>Ephemerella guttulata</i>	Same as Green Drake	May 28
Gray Drake (1)	<i>Ephemerella guttulata</i>	Same as Green Drake	May 28
Iron Blue Dun (1)	<i>Leptophlebia johnsoni</i>	Pa., N. Y., N. H., Que., Ontario	May 28
Grannon (5)	<i>Brachycentrus fuliginosus</i>	Pa., N. Y., Wash., Ontario	May 29
Jenny Spinner (1)	<i>Leptophlebia johnsoni</i>	Same as Iron Blue Dun	June 1
Brown Quill (1)	<i>Siphonurus quebecensis</i>	Pa., N. Y., N. C., Ont., Quebec	Variable
Green bottle or			
Blue bottle fly (5)	<i>Lucilia casear</i>	Commonly distr.	June 1
Whirling Crane fly (4)	<i>Tipula bella</i>	Pa., N. Y., N. J.	June 1
Orange Crane fly (4)	<i>Tipula bicornis</i>	Same as above	June 1
Golden Eyed Gauze Wing (5)	<i>Chrysopa occulata</i>	Commonly distr.	Variable
White Mayfly (1)	<i>Stenonema rubromaculatum</i>	Pa., N. Y., Mass., Ill., Ont., Quebec, N. B., N. S.	June 2
White Gloved Howdy (1)	<i>Isonychia albomanicata</i>	Pa., N. Y., Ont., N. C.	June 27
Yellow Sally (3)	<i>Isoperla spp.</i>	Commonly distr.	June 28
Golden Spinner (1)	<i>Potomanthus distinctus</i>	Pa., N. Y., W. Va., Ohio	June 28
Willow or Needle Stonefly (3)	<i>Leuctra grandis</i>	Pa., N. Y., N. J., North Carolina	June 28
Stonefly Nymph (3)	<i>Acroneuria lycorias</i>	Pa., N. H., N. Y., Mass., Me., W. Va., Mich., Wisc., Que.	June 28
Brown Silverhorns (2)	<i>Athripsodes wetzeli</i>	Pa., N. Y. Similar species in Wisc. and Ontario	June 29
Big Orange Sedge (2)	<i>Neuronia postica</i>	Pa., Ga., Mass., Wisc., Newfoundland and Washington, D. C.	June 30
Yellow Drake (1)	<i>Ephemerella varia</i>	Pa., N. Y., Mich., N. H., Ont.	July 1
White Caddis (2)	<i>Leptocella exquisita</i> , <i>leptocella albida</i> , <i>leptocella spp.</i>	Florida to Canada	July 1
Deer Fly (5)	<i>Chrysops vittatus</i>	Eastern and Northern States	Variable
Green Midge (5)	<i>Chironomus modestus</i>	Pa., N. Y., N. J., Ontario	July 4

Note. The number in parenthesis following the common name of the insect indicates the following: 1. Mayfly; 2. Caddisfly; 3. Stonefly; 4. Crane fly; 5. Miscellaneous.

For a more detailed treatise, as well as a description of the natural insects described above together with their imitations, the reader is referred to the following books available at most libraries:

Practical Fly Fishing by Chas. M. Wetzel. The Christopher Publishing House, 1140 Columbus Avenue, Boston, Mass.

Trout Flies by Charles M. Wetzel. The Stackpole Company, Harrisburg, Pa.

